BOSTON
MEDICAL LIBRARY

FOUNDED
SERVAT
ET
DOCET
A.D. 1875
INCORPORATED 1877

IN THE
Francis A. Countway
Library of Medicine
BOSTON

Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/medicalannalsofd4019medi

# MEDICAL ANNALS

*of the*

# DISTRICT OF COLUMBIA

Official Publication of
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

---

**VOLUME XL**
**1971**

---

EDITORIAL BOARD

WALLACE M. YATER, M.D., *Editor*
RAYMOND SCALETTAR, M.D., *Associate Editor*
JUDITH E. PERRUSO, *Assistant Editor*
F. P. FERRARACCIO *Managing Editor*
BRIAN BLADES, M.D.
FREDERIC G. BURKE, M.D.
J. KEITH CROMER, M.D.
I. PHILLIPS FROHMAN, M.D.
NAOMI M. KANOF, M.D.
ZIGMOND M. LEBENSOHN, M.D.
THOMAS M. PEERY, M.D.
GEORGE E. SCHREINER, M.D.
DONALD STUBBS, M.D.

EDITORIAL OFFICE, 2007 EYE STREET, N.W. WASHINGTON, D.C. 20006

Volume 40 · Number 1 · January 1971

# MEDICAL ANNALS of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

## THE WASHINGTON HOSPITAL CENTER NUMBER

**Chromium-51 Scanning in Placenta Praevia**
GRANT P. BAGLEY, M.D. AND SAMUEL M. DODEK, M.D.

**Associated Anorectal Diseases with Hemorrhoids**
JACOB J. WEINSTEIN, M.D.

**Fractures of the Orbit**
BURTON H. COHN, M.D.

**Epicardial Onlay Pacemaker Lead**
NICHOLAS P. D. SMYTH, M.D., SOL LEKAGUL, M.D. AND
JOHN M. KESHISHIAN, M.D.

**Anti-Diuretic Hormone in Cirrhosis Liver**
STUART H. DANOVITCH, M.D., WASEEM SHORA, M.D. AND
PETER M. BERKMAN, M.D.

**Heparin in Meningococcal Thrombocytopenic Coagulopathy**
LAWRENCE E. PIERCE, M.D., LEONARD D. CUTLER, M.D., AND
JAMES A. CURTIN, M.D.

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
11 FEB 1971

Workmen assemble reinforcing rods prior to pouring concrete for construction of Intensive Care Wing at the Washington Hospital Center.

(Complete Index on Page 5)

Boston, Mass. 02115

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann La Roche Inc.
Nutley, New Jersey 07110

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
11 FEB 1971

His wife has a lot of different
·nopausal symptoms, but only a few
ılly irritate *him*. Her hot flashes, her
:tigo, her palpitations—that's *her*
›blem. What really bothers him is
r nervousness, her irritability and
r excessive anxiety, often expressed
endless "book-shuffling, chain-
oking, reading-lamp" insomnia!
Menrium takes care of hot flashes,
·tigo, palpitations in most
enopausal women. Menrium
ovides the well-known antianxiety
tion of chlordiazepoxide (Librium®)
d water-soluble esterified estrogens.
therefore relieves more symptoms
an either component separately.
takes care of the vasomotor
nptoms as well as the emotional
nptoms. This means the symptoms
at bother his wife most. And the
nptoms that irritate him most.
So, to help them both get through
r menopause, remember Menrium.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

**Contraindications:** Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

**Precautions:** In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

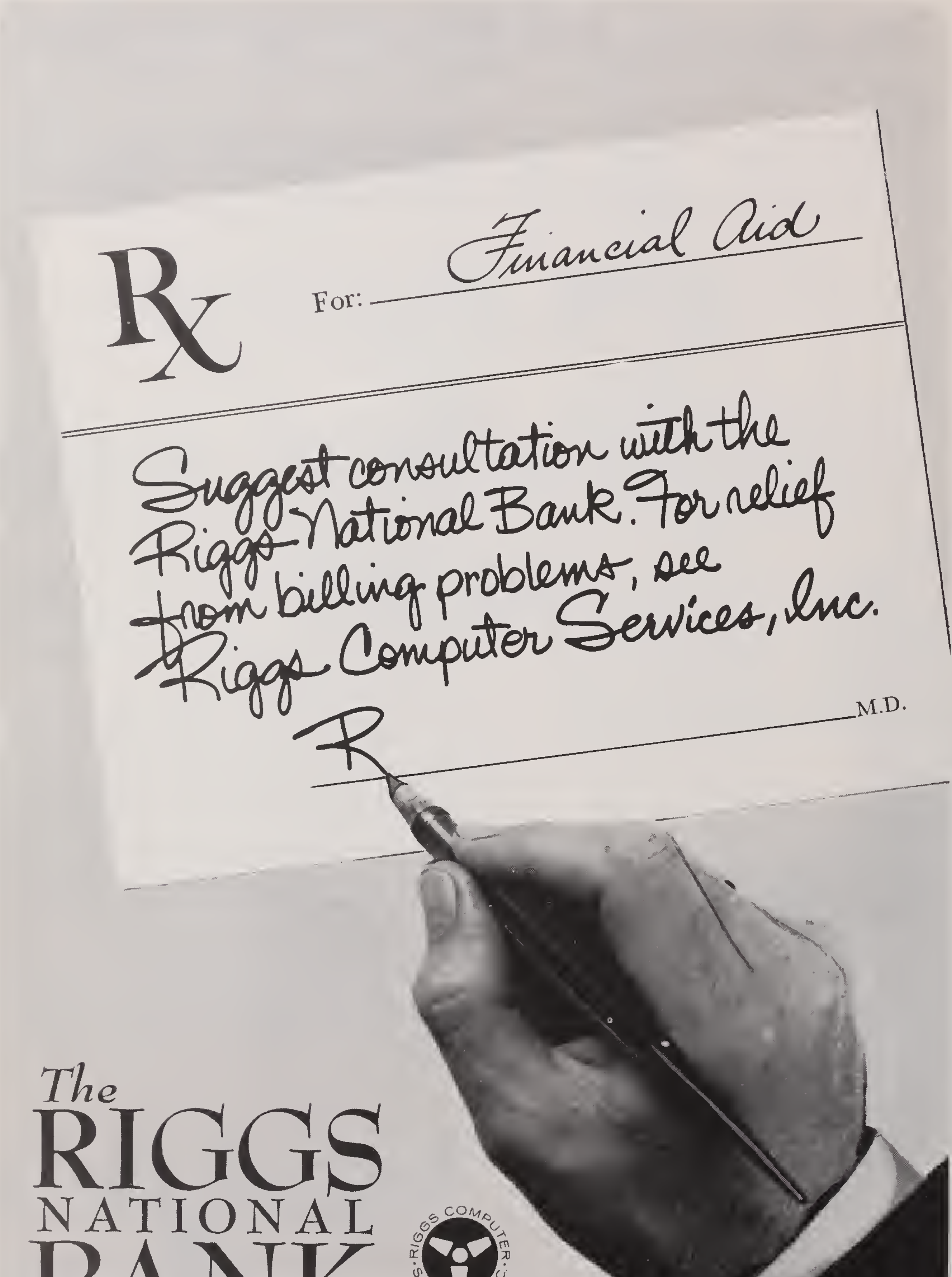
**Adverse Reactions:** Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

**Usual Dosage:** One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

| | | |
|---|---|---|
| **5 mg chlordiazepoxide** | 5-2 | **0.2 mg water-soluble esterified estrogens** |
| **5 mg chlordiazepoxide** | 5-4 | **0.4 mg water-soluble esterified estrogens** |
| **10 mg chlordiazepoxide** | 10-4 | **0.4 mg water-soluble esterified estrogens** |



Rx For: Financial Aid

Suggest consultation with the Riggs National Bank. For relief from billing problems, see Riggs Computer Services, Inc.

R M.D.

The
RIGGS
NATIONAL
BANK
of WASHINGTON, D.C. • FOUNDED 1836

RIGGS COMPUTER SERVICES, INC.

Member Federal Deposit Insurance Corporation • Member Federal Reserve System • Phone 783-5600

**VOLUME 40 • JANUARY 1971**

**EDITOR**

Wallace M. Yater, M.D.

**ASSISTANT TO THE EDITOR**

Judith E. Perruso

**MANAGING EDITOR**

Francisco P. Ferraraccio

**EDITORIAL BOARD**

Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**

Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
James A. Halsted, M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Frank S. Pellegrini, M.D., President*
Marvin C. Korengold, M.D., President-elect*
Howard Katzman, M.D., First Vice President*
James E. Boland, M.D., Second Vice President*
Mr. Thomas Sadler, Secretary-Treasurer*

**EXECUTIVE BOARD**

Robert J. Coffey, M.D. Chairman (1970)
Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Frank S. Bacon, M.D. (1973)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

Mr. Warren E. Magee

---

* Ex officio member of the Executive Board

# MEDICAL ANNALS of the DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

Short-acting diuretics may create abrupt,
inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flo
rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

Hygroton® chlorthalidone U

Makes water, not waves.

You know
diuretics
medically.

But
have you
met them
socially?
LADIES

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7

# MEDICAL ANNALS
## of the District of Columbia

### WASHINGTON HOSPITAL CENTER NUMBER

## *Contents for January*

### SCIENTIFIC ARTICLES

The Reliability of Chromium-51 Isotope Scanning in the Diagnosis and Management of Placenta Praevia. *Grant P. Bagley, M. D. and Samuel M. Dodek, M. D., F. A. C. S., Washington* 1

The Significance and Importance of Associated Anorectal Diseases with Hemorrhoids. *Jacob J. Weinstein, M. D., F. A. C. S., Washington* 4

Fractures of the Floor and Medial Wall of the Orbit. *Burton H. Cohn, M. D., Washington* 9

Post-Operative Variations in the Electrophysiology of the Epicardial Onlay Pacemaker Lead. *Nicholas P. D. Smyth, M. D., Sol Lekagul, M. D.,* and *John M. Keshishian, M. D., Washington* 12

Apparent Inappropriate Anti-Diuretic Hormone Secretion in Cirrhosis of the Liver. *Stuart H. Danovitch, M. D., Waseem Shora, M. D.,* and *Peter M. Berkman, Washington* 16

Heparin Therapy in Meningococcal Thrombocytopenic Coagulopathy. *Lawrence E. Pierce, M. D., Leonard D. Cutler, M. D.,* and *James A. Curtin, M. D., Washington* 19

### EDITORIALS

Intensive Care Unit 47

The Misuse of Cerebrospinal Fluid Shunts—A Brief Contemporary Comment 48

The Care of the Celebrity 49

New Program for Infants Announced 50

### SPECIAL SECTIONS

History of the Medical Society of the District of Columbia. Chapter VII. *Theodore Wiprud* 41

Officers and Personnel of Boards and Committees for 1971 71

### MISCELLANY

President's Page: "Medicine for the Seventies" 27

104th President of the Medical Society of the District of Columbia—*Marvin C. Korengold, M.D.* 28

Patients Needed for Clinical Center Studies 50

Summary of Executive Board Actions 51

D. C. Health Notes 56

DOCPAC Briefs. *Darrell C. Crain, M. D.,* Washington 60

National and Regional Meetings 61

New Members 61

General News 65

Meetings 68

Obituaries 68

Book Reviews 69

Reports Presented at the Annual Business Meeting 1971 77

- Proposed Budget for 1971 82
- Report of the Nominating Committee 84
- In Memoriam to Deceased Members—1970 84

*Medical Annals Staff and Officers of Medical Society* *Adv 5*

*Classified Advertisements* *Adv 10*

*Index of Advertisers* *Adv 12*

*Books Received* *Adv 9*

---

Copyright ©, 1971 by The Medical Society of the District of Columbia. *Yearly Subscription, $8.00. Single Number, 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

ILOSONE
LIQUID
250
Lilly

**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
**Ilosone Liquid 250**
Erythromycin Estolate
(equivalent to 250 mg of base per 5-ml teaspoonful)

*Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206*

Lilly

100204

MEDICAL ANNALS
of the District of Columbia

*January 1971*
VOLUME XXXX • NUMBER 1

**Washington Hospital Center Number**

This is the tenth in a sixth series of special numbers of the MEDICAL ANNALS, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan area. For the WASHINGTON HOSPITAL CENTER NUMBER the Editorial Board is indebted to Dr. Jay Shapiro, Chairman, Endocrinology Section, Washington Hospital Center, who secured the papers which appear in this issue.

# The Reliability of Chromium-51 Isotope Scanning in the Diagnosis and Management of Placenta Praevia

GRANT P. BAGLEY, M.D.* AND
SAMUEL M. DODEK, M.D., F.A.C.S., F.A.C.O.G.†

IN 1963 a technique for rapid and dependable localization of the human placenta, using Chromium-51 labelled red blood cells was developed at The Washington Hospital Center in the Departments of Anesthesiology and Obstetrics and Gynecology.[1] Since that time the method has been utilized as a diagnostic aid in the management of third trimester bleeding in pregnancy.

In 1950 Browne and Veall[2] used $\text{sodium}_{24}$ to determine placental site. In 1955 and 1957 Weinberg et al[3,4] first employed $\text{sodium}_{24}$ and then $\text{iodine}_{131}$ for the same diagnostic purpose.

The very short half life of $\text{sodium}_{24}$ causes considerable inconvenience in the timing of the scan and has generally been abandoned for this purpose in pregnancy. If $I_{131}$ ‡ is used, Lugol's solution must be given to the mother from 1 to 24 hours before the scan to block and protect the fetal thyroid.

Since 1963, when our report first appeared, placental localization has also been performed with considerable accuracy by others using automatic scintillation scanning with Technetium-99m-labelled serum albumin.[5-10] The preparation of 99m-Tc-HSA takes about an hour and the scans take 30 to 40 minutes. The fetal thyroid should be protected by giving potassium perchlorate to the mother. Scanning with this isotope requires the use of a fixed, costly scanner, and patients must be transferred to the nuclear laboratory of the hospital for the ultimate diagnostic procedure.

Kohorn et al[11] have pointed out that ultrasonic compound-B scanning is an equally reliable method of placental localization. It does not depend upon surface landmarks, and irradiation risks are eliminated, no matter how small they may be with $Cr_{51}$ and 99m-Tc-HSA. Ultrasound examination can also be carried out at any time. It takes 15 to 30 minutes, and no preparation of the patient or materials is required. However, this method, as well as color and photoscans need the support of a medical physics department.

None of these drawbacks or objections is associated with our method, and blood-volume studies and *determinations as well,* can be made at the same time.[12] The technique utilizes $\text{chromium}_{51}$ labelled type O rH negative red blood cells which are prepared daily and are therefore readily available. The patient's own cells may also be labelled for use in 20 minutes. Eight to 10 cc of these tagged red blood cells are then injected intravenously, totalling 10–20 microcuries. Since the halflife of $\text{chromium}_{51}$ is 28 days, the mother receives less than 12 m-rads of exposure from a maxiumum dose of 20 microcuries. The maximum whole body radiation to the fetus is probably less than 2 microcuries, assuming no placental transfer. The amniotic fluid and surrounding tissues absorb an estimated 75% of the radiation. It is believed that the indications for using this method outweigh potential dangers to both mother and fetus.

---

* Resident, Department of Obstetrics and Gynecology, The Washington Hospital center, 110 Irving Street, N. W., Washington, D. C.

† Senior Advisory Staff, Department of Obstetrics and Gynecology, The Washington Hospital Center, and Clinical Professor of Obstetrics and Gynecology, The George Washington University, School of Medicine, Washington, D. C.

‡ This isotope is considered contraindicated in the latter trimesters of pregnancy by the American College of Obstetricians and Gynecologists (Technical Bulletin, November 1966).

After the injection of the labelled red blood cells 10 minutes is allowed for mixing in the mother's circulation. The abdominal wall overlying the uterus is then scanned at the patient's bedside, with an inexpensive, easily portable, small hand-held battery-operated scintillation counter. The area of greatest intensity—the site of the placenta—is easily found and marked off on the skin. A diagrammatic copy of the findings can be attached to the patient's chart.

Our Staff's initial report[1] on this method indicated an accuracy of 99%. Others using the same method have reported similarly accurate results.[13]

In order that we might re-assess the accuracy of the Cr-51 method of placental localizaton and at the same time evaluate its use in the management of placenta praevia, the cases of all patients with this complication who were admitted to the Obstetrical Department of The Washington Hospital Center from 1963–68 were reviewed.

We determined the location of the placenta with 100% accuracy in every patient scanned, and the diagnosis was confirmed in each at the time of delivery.

During this survey there were 119 hospital admissions of 107 patients ultimately diagnosed as having placenta praevia or low-lying placenta. The incidence of this entity during the period reviewed was 0.48%. The age and parity distributions are shown in figures 1 and 2, but they do not agree with the usually accepted increase in incidence with advancing age and parity that has been reported in other large series.[14-16]

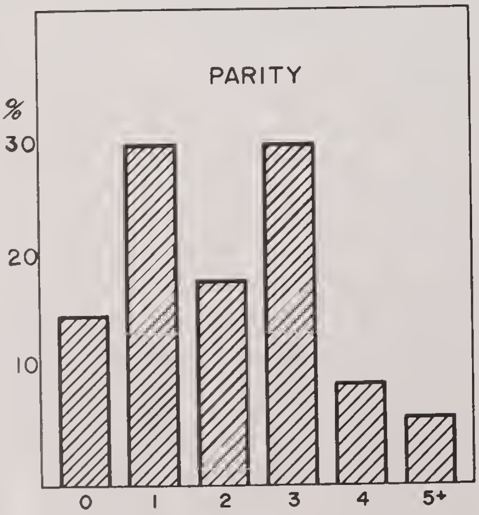


FIG. 1.

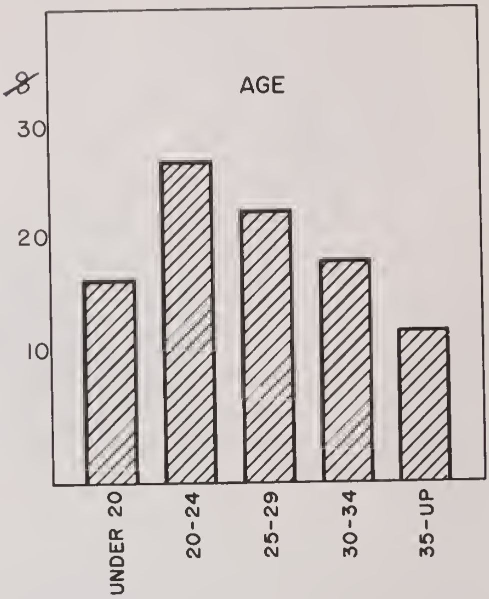


FIG. 2.

Of the 107 patients, 68 were diagnosed as having vertex presentations, 22 as breech, and 17 as transverse lie. At the time of admission over half were less than 37 weeks of gestation. More than a fourth were from 35–37 weeks. Total placenta praevia occurred in 28%, partial in 33%, and a low-lying placenta in 39%.

The method of delivery was by cesarean section in 76% of our cases, and the great majority of these procedures were low cervical operations.

Of the vaginal deliveries 6% were breech extractions. Two internal podalic versions and extractions were performed, 1 of which was for the delivery of a second twin. The obstetrical procedures in our series are similar in incidence to those reported by other clinics in their management of placenta praevia.[14-16]

Seventy-five of the 107 patients with placenta praevia were first diagnosed by the use of the placental scan. Sixty-five came in with genital bleeding.

The diagnosis of placenta praevia was made in the absence of genital bleeding on 10 occasions. In 7 of these the indications for scanning was a transverse lie or lack of engagement of the vertex. The remaining patients were diagnosed after the onset of genital bleeding by scanning, except for 4 in whom the diagnosis was made incidental to the performance of cesarean sections for diabetes and former sections.[2]

There were no maternal deaths. The perinatal mortality incidence reveals the expected direct relationship to gestational age and fetal weight. The uncorrected relationship is shown in table 1 and is

**TABLE 1: Ages of Fetuses**

| Age | Per cent |
|---|---|
| Under 32 weeks | 72.0 |
| 32–34 weeks | 22.4 |
| 35–37 weeks | 9.1 |
| More than 37 weeks | 3.0 |

similar to most reported series from institutions utilizing an expectant management with placenta praevia.[15,17,18]

The expectant management of placenta praevia was followed in 41 patients. This includes patients who were observed for 72 hours or longer before delivery was finally decided upon. The average gestational growth gained by this method of management, made possible by placental localization, was 24 days and ranged from 3 to 79 days. One patient was diagnosed at 28 weeks and delivered at 39 weeks.

A positive scan diagnosis of placenta praevia was made in only 95% of all the patients managed expectantly, since 2 of them were not scanned.

The reliability of the Cr$_{51}$ method of diagnosis was depended on in reaching decisions as to whether or not a patient should be admitted for prolonged prenatal hospitalization. There was only 1 instance of unwarranted lengthy hospitalization. In that case the placental scan correctly located a fundal postion of the placenta, but the attending pysician erroneously interpreted the impressions he got from the history and the examination he made with a "double-set-up," as placenta praevia.

While the accuracy of the location of the placenta was 100%, the differentiation of the degrees of placenta praevia was somewhat less precise. There was a fairly high correlation between the incidence of clinically confirmed total placenta praevia and the findings with the isotope scanning method. When the area of maximum intensity was symmetrical over the symphysis pubis, total placenta praevia was accurately predicted. When the highest count was accentrically distributed over the pubic area and the probability was greater that the placenta was either a marginal praevia or low-lying, but an absolute distinction could not be made.

In figure 3 we have shown the correlation between the sites located and predicted, by Cr$_{51}$ scanning and the actual placental locations confirmed at the time of delivery.

| DIAGNOSIS BY SCAN | | LOCATION AT DELIVERY | | |
|---|---|---|---|---|
| | | TOTAL | MARGINAL | LOW |
| TOTAL | 20 | 16 | 4 | 0 |
| MARG OR LOW | 38 | 3 | 15 | 13 |
| EQUIVOCAL | 14 | 2 | 3 | 9 |

FIG. 3.

## Summary

Isotopic placental localization has been accepted in the United States and abroad and found to be accurate. We have found the uncomplicated and rapid method of using Chromium$_{51}$ to be dependable in all of the patients so examined in the Washington Hospital Center, since 1963.

The use of an isotope for establishing placental position in the third trimester of pregnancy does not carry with it any of the inherent risks of amniography and arteriography. There is also a great deal less radiation to the fetus than with soft tissue X-ray studies.

In addition to its indicated use in determining the probability of placenta praevia as a cause of third trimester bleeding, the test also has significant value when used at or near term in patients with malposition of the fetus and when the presenting part fails to enter the pelvis.[19] In 10 patients in our series the establishment of the presence of an unsuspected placenta praevia was of inestimable value.

In order to determine the site of third trimester bleeding a vaginal examination and direct inspection of the cervix can be done without fear when one is confident that the placenta is not lying over the internal os.

Any member of a hospital house staff can become acquainted with the technique and interpretation of the test after a very short experience. The equipment is inexpensive and available, and a patient can be scanned at her bedside without harm or inconvenience.

## References

1. PAUL, J. D., GAHRES, E. E., ALBERT, S. N., TERRELL, W. D., JR., and DODEK, S. M.: Obstet. Gynec., 1963, 21, 33.
2. BROWNE, J. C. MCC, and VEALL, N. A.: J. Obstet. Gynec. Brit. Comm., 1950, 57, 566.
3. WEINBERT, A.: Obstet. Gynec. Survey, 1955, 10, 461.
4. WEINBERT, A., RIZZI, J., MCMANUS, R., and RIVERA, J.: Obstet. Gynec., 1957, 9, 692.
5. GOTTSCHALK, A.: Amer. J. Roentgen., 1966, 97, 860.
6. JOHNSON, P. M., SVIARRA, J. J. and O'LEARY, J. A.: Radiology, 1967, 89, 321.
7. LARSON, S. M. and NELP, W. B.: Amer. J. Obstet. Gynec., 1965, 93, 950.
8. MCAFFEE, J. G., STERN, H. S., FUEGER, F., BAGGISH, M. S., HOLZMAN, G. B. and ZOLLE, I: J. Nucl. Med., 1964, 5, 936.
9. SECKER WALKER, R. H. and KOHORN, E. I.: J. Obstet. Gynaec. Brit. Comm., 1968, 75, 464.

*(Continued on page 60)*

# The Significance and Importance of Associated Anorectal Diseases with Hemorrhoids

JACOB J. WEINSTEIN, M.D., F.A.C.S.*

ONE OF THE oldest and most common conditions to annoy and vex the human race is hemorrhoids. For years most authors have discussed hemorrhoids as a single anorectal disease. However, careful reading of the literature and personal experience have led to the significant finding that hemorrhoids rarely exist alone but frequently coexist with other anorectal diseases. For this reason a retrospective study of 200 consecutive patients operated upon by me primarily for hemorrhoidal disease were reviewed in order to learn the incidence, significance, and relationship of other associated anorectal diseases and the management of these related diseases.

The frequency of hemorrhoidal disease is not known. Perhaps less than 25 per cent of the adult population will complete life's journey without having been afflicted with hemorrhoids. The many studies on routine anosigmoidoscopy show that 20 to 30 per cent of all adults examined have demonstrable hemorrhoids, and that 40 to 60 per cent of those with anorectal complaints have significant hemorrhoidal disease.[1, 2] McCoy et al[1] in 1,000 routine anosigmoidoscopies for all new patients seen in the outpatient department of the George Washington University Hospital, regardless of their original complaints, found that 21.2 per cent had significant hemorrhoidal disease.

## Sex and Age Distribution

One hundred and one patients, or 50.5 per cent of the 200 patients were males; 99 or 49.5 per cent were females. Statistics indicate a more common incidence of anorectal diseases in males, varying from a 2:1 to a 4:1 ratio but my data do not conform to this.

Hemorrhoids are diseases of adult life, predominantly in the third, fourth and fifth decades.[2, 3] Eighty per cent of those who underwent surgery for hemorrhoids were between 30 and 60 years of age, 11 per cent between 20 and 30 years of age, and only 9 per cent between 60 and 70 years of age. The 40-50-year decade seems to be the most common period for hemorrhoid surgery (37.5 per cent).

The average age was 43.4 years, the average male age 44.9 years, and the average female age 41.4 years. The youngest patient was a 22-year-old female, and the oldest was a 69-year-old male. Table 1 gives the age distribution of patients who underwent hemorrhoidal surgery.

TABLE 1: Age Distribution of 200 Consecutive Operations for Hemorrhoidal Disease

| Age | No. of Patients | Per Cent |
|---|---|---|
| 20–24 | 6 | 3.0 |
| 25–29 | 15 | 7.5 |
| 30–34 | 25 | 12.5 |
| 35–39 | 28 | 14.0 |
| 40–44 | 44 | 22.0 |
| 45–49 | 31 | 15.5 |
| 50–54 | 21 | 10.5 |
| 55–59 | 12 | 6.0 |
| 60–64 | 11 | 5.5 |
| 65–69 | 7 | 3.5 |
| | 200 | |

Average Age 43.4 years
Average male age: 44.9 years Youngest: 22 year old female
Average female age: 41.4 years Oldest: 69 year old male

## Symptoms

The 3 most frequently described symptoms in decreasing frequency were bleeding, protrusion, and pain. Bleeding was noted in 58.5 per cent of the 200 patients. It was described as occurring with the stool most often (36.5 per cent), on the paper after the stool 8.5 per cent, and both with the stool and on the paper in 13.5 per cent. Though the bleeding loss with hemorrhoids is rarely profuse, it is rather steady and regular with most stools: therefore, a significant anemia may develop. In a previous report White and Weinstein (4) noted anemia in 27.2 per cent of pre-operative patients with hemorrhoidal disease.

Protrusion, the second most frequently described complaint (18.5 per cent), occurs with the act of defecation but reduces itself to normal position afterward. In 15 per cent the protrusion was noticed without defecation but was reduced by manual manipulation. In only 5 per cent was the protrusion irreducible by manipulation.

---

* Chairman, Department of Surgery, Washington Hospital Center, 110 Irving Street, N.W., Washington, D. C. 20010; Associate Clinical Professor of Surgery, George Washington University School of Medicine, Washington, D. C.

The third most common complaint was pain. This was described by 13.5 per cent. There is no pain associated with hemorrhoids except as a manifestation of hemorrhoidal complications such as thrombosis, excoriation of the mucosa and skin, and the presence of associated conditions such as fissure-in-ano, cryptitis and papillitis, abscess formation, and fistula-in-ano.

Twenty-four per cent described the following symptoms: itching, change in character of the stool, weight loss, seepage, soiling or discharge, and burning or crawling sensations. Table 2 shows the incidence of symptoms.

**TABLE 2: Symptoms in 200 Patients with Hemorrhoids**

| Symptoms | No. of Patients | Per Cent |
|---|---|---|
| Bleeding | 117 | 58.5 |
| with stool | 73 | 36.5 |
| after stool on paper | 17 | 8.5 |
| with stool and after stool on paper | 27 | 13.5 |
| Protrusion with or without stool | 37 | 18.5 |
| Pain | 27 | 13.5 |
| Itching | 18 | 9.0 |
| Change of character of stool | 10 | 5.0 |
| Weight loss | 9 | 4.5 |
| Seepage or discharge | 8 | 4.0 |
| Burning or crawling sensation | 3 | 1.5 |

Note: 83 patients, or 41.5%, gave no history of bleeding.

### Duration of Symptoms

Patients notoriously think little of "piles" and will defer seeking medical care for as long as possible. Of the patients presenting characteristic symptoms of hemorrhoidal disease, 30 per cent waited 6 months to 5 years before having surgery, and 25 per cent had distinct bothersome symptoms for from 1 to 6 months before surgery. Only 18.5 per cent described symptoms of from 1 week to 1 month. More than 80 per cent had physical findings of acute complications of hemorrhoidal disease, which had been treated conservatively without success before surgical aid was sought. Thirteen and one-half per cent sought aid within 1 week of the onset of symptoms. These figures indicate that many patients with hemorrhoidal disease wait until complications set in before seeking help (table 3).

The blame for the delay in seeking treatment for hemorrhoidal and other anorectal diseases is to be placed either on the patient who procrastinates until the severe discomfort demands care or on the physician who will not regard seriously the patient complaining of hemorrhoids, and who is ever ready to prescribe an ointment or suppository without adequate examination and evaluation. I estimate that well over one-half of the 200 patients had been given suppositories or ointments by their physicians, and that more than 75 per cent of the entire group had medicated themselves many times with drug-store preparations suppositories and laxatives.

Many a physician has voiced the opinion that hemorrhoids should be left alone until they really become bothersome to the patient. In other words, surgical treatment for hemorrhoids is not advocated by many physicians until complications develop. It has also been observed that, of the physicians who do diagnostic anosigmoidoscopic examinations for polyps and tumors, many forget that there is an anorectal area. The examining physician seems so interested in passing the instrument the full 25 cm. length to find polyps or tumors that he rarely spends any time examining and evaluating the anorectal area with the anoscope.

### Preparation for Anosigmoidoscopy

All of the patients in this study were anoscoped and sigmoidoscoped before surgery. Findings were recorded by descriptive terms and by the use of graphic charts for the location of the different pathological findings.

Prior to 1955 patients usually prepared themselves for this examination by using 2 or 3 tapwater enemas at home 2 to 3 hours before coming to the office. Since the early part of 1955 the use of a small, 130 cc, simple and very adaptable disposable enema package used in the office prior to anosigmoioscopy has been the procedure of choice. Each 100 cc of the enema solution contains 12 grams of sodium dihydrogen phosphate and 10 grams of sodium

**TABLE 3: Duration of Symptoms with Hemorrhoids**

| Time | No. of Patients | Per Cent |
|---|---|---|
| 1–7 days | 27 | 13.5 |
| 1–4 weeks | 37 | 18.5 |
| 1–6 months | 50 | 25.0 |
| ½–5 years | 60 | 30.0 |
| 6–10 years | 9 | 4.5 |
| 11–15 years | 6 | 3.0 |
| 16–20 years | 4 | 2.0 |
| 21–25 years | 1 | 0.5 |
| 26–30 years | 3 | 1.5 |
| 31–35 years | 1 | 0.5 |
|  | 200 |  |

citrate. Because the enema bag fits into the palm of the hand, the enema can be taken by the patient in the sitting position, is easily manipulated, compressed and emptied. Each unit has its own lubricated nozzle along with a length of plastic tubing of 18 inches from the nozzle to the enema bag, permitting easy self-administration.

The use of the disposable hydrogogue enema in the office obviates the patient having to take time off from work and eliminates the time spent at home preparing the bowel for the office anosigmoidoscopy.

The cleansing results with this disposable hydrogogue enema have been excellent. There has been a 90 per cent cleansing of the rectum and distal sigmoid as visualized by a 25 cm. sigmoidoscope. If the patient is examined within 5 to 10 minutes after the use of the disposable enema there is no significant irritation or reddening of the bowel mucosa.

## Classification of Hemorrhoids

Hemorrhoids are classified broadly as internal, external, and internal-external. There is the more detailed descriptive pathological classification reported by Dodd[5] as used at the St. Marks Hospital, London, which helps to define more clearly the hemorrhoidal pathology seen. It is brief: (1) first degree–presence of increased number and size of veins of the anal canal which bleed easily during defecation, (2) second degree–those hemorrhoids which prolapse with the stool but return again spontaneously, and which may or may not be associated with bleeding, and (3) third degree–internal hemorrhoids which protrude without stool along with external hemorrhoidal veins which are not readily reducible. Hemorrhoids are still further described by the complications such as thrombosis, ulceration and gangrene.

I have found that these classifications aid in determining which patients need surgical intervention and which can be treated adequately by sclerosing therapy.

Table 4 describes the classification of pathology noted on anoscopy before surgery for hemorrhoids

## Anorectal Findings and Associated Diseases

Of the 200 patients, 91.5 per cent had internal hemorrhoids with varying degrees of other lesions pathology.

With straining during examination, 62.5 per cent showed protrusion beyond the level of the lower border of the internal sphincter. However, only 37 patients, or 18.5 per cent, gave a history of protrusion.

Another significant finding was the presence of prolapsed internal hemorrhoids in 22 per cent of those patients classified as Stage 3 according to St. Marks Hospital classification which could not be completely reduced, and only 6 per cent of the 200 actually complained or irreducibility. Protrusion is usually long-standing, and 45 per cent of all cases operated upon for hemorrhoids disregarded the obvious protrusion. Active bleeding and visible ulceration of the internal hemorrhoids were seen in 36 patients, or 18 per cent.

Three-fourths (75.5 per cent) of the patients with hemorrhoids which required definitive surgical care had associated anorectal diseases.

Fissure-in-ano was the disease most frequently found. Sixty-three patients, 31.5 per cent, had active fissures in various stages of development–acute, subacute, or chronic.

Of the 115 patients with internal-external hemorrhoids, 42 had fissure-in-ano; of the 68 patients with internal hemorrhoids, 13 had fissures; and of those patients with external hemorrhoids, 8 had fissures.

Chronic cryptitis with enlarged papillae was present in 33 patients, 16.5 per cent and acute cryptitis with edematous papillae in 18 patients or 9 per cent. The second most common anorectal disease associated with hemorrhoids is, therefore, chronic or acute cryptitis and papillitis, occurring in 25.5 per cent of the cases.

Fistulae-in-ano was the third most frequent disease associated with hemorrhoids and was found in 19 patients, or 9.5 per cent.

Contracted anus was less frequent than might be expected, occurring in 5 per cent of the group, and was seen in those patients who had chronically infected fissures of long standing.

**TABLE 4: Classification of Hemorrhoidal Pathology Noted on Anoscopy Before Surgery for Hemorrhoids**

| Diagnosis | No. of Patients | Per Cent |
|---|---|---|
| *Internal hemorrhoids* | 68 | 34.0 |
| First degree | 14 | 7.0 |
| Second degree | 54 | 27.0 |
| Third degree | 0 | 0.0 |
| *Internal-external hemorrhoids* | 115 | 57.5 |
| First degree | 0 | 0.0 |
| Second degree | 71 | 35.5 |
| Third degree | 44 | 22.0 |
| Thrombosis | 33 | 16.5 |
| Thrombosis and gangrene | 6 | 3.0 |
| *External hemorrhoids* | 17 | 8.5 |
| Thrombosis | 14 | 7.0 |
| Thrombosis and ulceration | 3 | 1.5 |

Skin tags, found in 12.5 per cent of the series, were not considered a part of active anorectal disease but rather a manifestation of previous anorectal disease which had resolved itself.

Anal abscess was noted in 8 patients, or 4 per cent.

Polyps within reach of 25 cm instrument were found in 18 patients (9 per cent). These were all benign, and colon X-ray examination revealed no other polyps above that portion of the sigmoid seen by instrumentation. This percentage is higher than the usual 1 to 5 per cent incidence reported by others with routine diagnostic anosigmoidoscopy of healthy adults.[1, 2]

Table 5 lists the number and incidence of anorectal findings and associated diseases found on anosigmoidoscopy prior to definitive surgery for hemorrhoids.

**TABLE 5:** Anorectal Findings and Associated Diseases Found on Pre-operative Anosigmoidoscopy

| Disease | No. of Patients | Per Cent |
|---|---|---|
| Hemorrhoidal diseases | | |
| Internal hemorrhoids | 183 | 91.5 |
| External hemorrhoids | 132 | 66.0 |
| Protrusion | 125 | 62.5 |
| Rosette with prolapse | 44 | 22.0 |
| Ulceration of internal hemorrhoids | 36 | 18.0 |
| Complications with hemorrhoids | | |
| Thrombosis of internal and external hem. | 33 | 16.5 |
| Thrombosis of external hemorrhoids | 14 | 7.0 |
| Thrombosis with ulceration external hem. | 3 | 1.5 |
| Gangrene of thrombosis int.-ext. hem. | 6 | 3.0 |
| Edema of internal hemorrhoids | 16 | 8.0 |
| Associated diseases | | |
| Fissure-in-ano | 63 | 31.5 |
| Chronic cryptitis and papillitis | 33 | 16.5 |
| Acute cryptitis and papillitis | 18 | 9.0 |
| Fistula-in-ano | 19 | 9.5 |
| Contracted anus | 10 | 5.0 |
| Superficial perianal abscesses | 8 | 4.0 |
| Other findings | | |
| Skin tags | 25 | 12.5 |
| Polyps | 18 | 9.0 |

## Significance of Associated Anorectal Diseases with Hemorrhoids

In this group of 200 patients who had surgery primarily because of hemorrhoidal disease, associated anorectal diseases were found in 75.5 per cent.

Since three-fourths of the patients with hemorrhoidal pathology had other anorectal diseases, the conclusion can be drawn that hemorrhoids are not a single disease but part of a group of anorectal diseases.

Infection and inflammation seem to be the common causative factors underlying hemorrhoids, fissure-in-ano, cryptitis and papillitis, fistula-in-ano, anal abscess, and anal contracture. The wide interest in the idea that infection is the principle etiologic factor in the development of anorectal diseases has its origin in the newer understanding of the anal ducts and glands, and the role of infection in these ducts, glands, and the surrounding tissues.[6, 7]

Nesselrod[7] is a firm believer of the importance of anal infection and the relationship of inflammatory process to the various anorectal diseases. He thinks that anal infection follows a definite pattern involving first the anal crypts, then the ducts, then the glands, and finally the adjacent blood vessels and lymphatics.

The high incidence of fissure-in-ano found with chronic hemorrhoids is due to the presence of the easily injured friable mucous membrane and anal skin associated with long-standing infection in this area.

## Surgical Principles and Techniques

Since hemorrhoids usually do not occur singly, but as part of a group of associated anorectal diseases, adequate surgery includes the following surgical principles: (1) removal of all hemorrhoidal tissues, (2) removal of all other associated anorectal lesions, (3) destruction or removal of all anal crypts, and (4) careful 'landscaping' of all external wounds.[3, 8, 9] If these principles are followed the end-result should be of the highest order with few, if any, recurrences.

In many hemorrhoidectomies I performed a partial posterior sphincterotomy of the lower border of the internal sphincter. This reduces the postoperative muscle spasm, thereby reducing pain and allowing for better drainage, which in turn decreases the chances for infection and fissuring in the open skin wounds left for drainage.

Sphincterotomy was done in all 58 patients having both fissure and hemorrhoids. In 55 of the 127 cases in which a classical or radical hemorrhoidectomy was performed an internal sphincterotomy was also done.

'Landscaping' of all external skin wounds is an essential part of good surgery for anorectal diseases. It permits drainage, obviates the formation of skin tags, and prevents the development of postoperative fissuring.[9]

The surgical procedures performed in the 200 consecutive cases presented in this study are listed in table 6.

TABLE 6: Types of Surgical Procedures
200 Consecutive Cases

| Type of Procedure | No. Cases |
|---|---|
| Classical Buie hemorrhoidectomy | 99 |
| Classical Buie hemorrhoidectomy and fissurectomy | 51 |
| Classical hemorrhoidectomy and fistulectomy | 5 |
| Classical Buie hemorrhoidectomy, fistulectomy, and fissurectomy | 7 |
| Radical Buie hemorrhoidectomy | 28 |
| Radical Buie hemorrhoidectomy and fissurectomy | 3 |
| Radical Buie hemorrhoidectomy and fistulectomy | 5 |
| Radical Buie hemorrhoidectomy, fistulectomy, and fissurectomy | 2 |
| Sphincterotomy | 113 |

### Summary

Hemorrhoids rarely exist alone but coexist with other significant anorectal diseases in 75.5 per cent of 200 patients operated upon for hemorrhoids and associated anorectal diseases.

Sex distribution was equal, and the 40- to 50-year decade was the most common period for hemorrhoidal surgery.

The 3 most common symptoms in decreasing frequency were bleeding, protrusion, and pain. The pain was not due to the hemorrhoids but to other local lesions.

Procrastination or putting off of definitive surgical care is characteristic of both the patient and the primary physician. Too many patients treat themselves with proprietary suppositories or ointments and physicians often incorrectly voice the opinion that hemorrhoids "should be left alone until they give a lot of trouble."

The immediate pre-anosigmoidoscopic preparation of the rectum and lower colon with a concentrated hydrogogue enema in the office has made anosigmoidoscopy a simple, accurate procedure. It has eliminated the waste of time at home and the time lost from work in preparation for this examination. The handy disposable enema used in this study produced excellent cleansing of the rectum and distal sigmoid in 90 per cent of the patients without significant irritation of the bowel mucosa.

The classification of hemorrhoids and the associated pathology as outlined aids the surgeon in planning the surgical procedures necessary to extirpate completely these diseases.

Seventy-five of the 200 patients had the following diseases of the anorectum as well as grade III and IV internal-external hemorrhoids: fissure-in-ano; chronic cryptitis and papillitis; fistulae-in-ano; contracted anus; skin tags; anal abscesses; rectal and lower sigmoid benign adenomatous polyps.

The high incidence of associated anorectal diseases with hemorrhoids indicates that they are all caused by a common denominator—infection. This follows a definite pattern involving first the anal crypts, then the ducts, then the glands, and finally the adjacent blood vessels and lymphatics.

The principles of adequate surgery of anorectal diseases have been listed.

### References

1. MCCOY, J. M., RAWLINGS, M. S., HARTMAN, C. R., and WEINSTEIN, J. J.: The value of routine anosigmoidoscopy as a diagnostic procedure in general practice. Amer. J. Proctol., 1952, 3, 31.
2. SHALLENBERGER, P. L. and FISHER, P.: Sigmoidoscopy: Statistical summary of 3500 consecutive sigmoidoscopies. J. Postgrad. Med., 1953, 13, 49.
3. BUIE, L. A., SR.: Practical Proctology, 2nd edition. Springfield, Illinois: Charles C Thomas, 1960, p.
4. WHITE, C. S. and WEINSTEIN, J. J.: Blood derivatives and substitutes. Baltimore: Williams and Wilkins Co., 1947.
5. DODD, H.: In discussion on Gass, O. C. and Adams, J.: Hemorrhoids: Etiology and pathology. Amer. J. Surg., 1950, 79, 55.
6. GORSCH, R. V.: Etiology, Pathology and Treatment, Review of Gastro., 1951, 18, 806; 1951, 18, 859; 1952, 19, 67.
7. NESSELROD, J. P.: Clinical proctology, 2nd edition. Philadelphia: W. B. Saunders Co., 1957.
8. EIKINS, R. F.: Pre- and post-operative care in proctology. J.A.M.A., 1953, 46, 182.
9. LOCKWOOD, R. A.: Atlas of anorectal surgery. New York: McGraw-Hill, 1964. Supplemental.
10. SMITH, N. D.: Proctologic facts and observations. Southern Med. J., 1953, 46, 79.

# Fractures of the Floor and Medial Wall of the Orbit

BURTON H. COHN, M.D.*

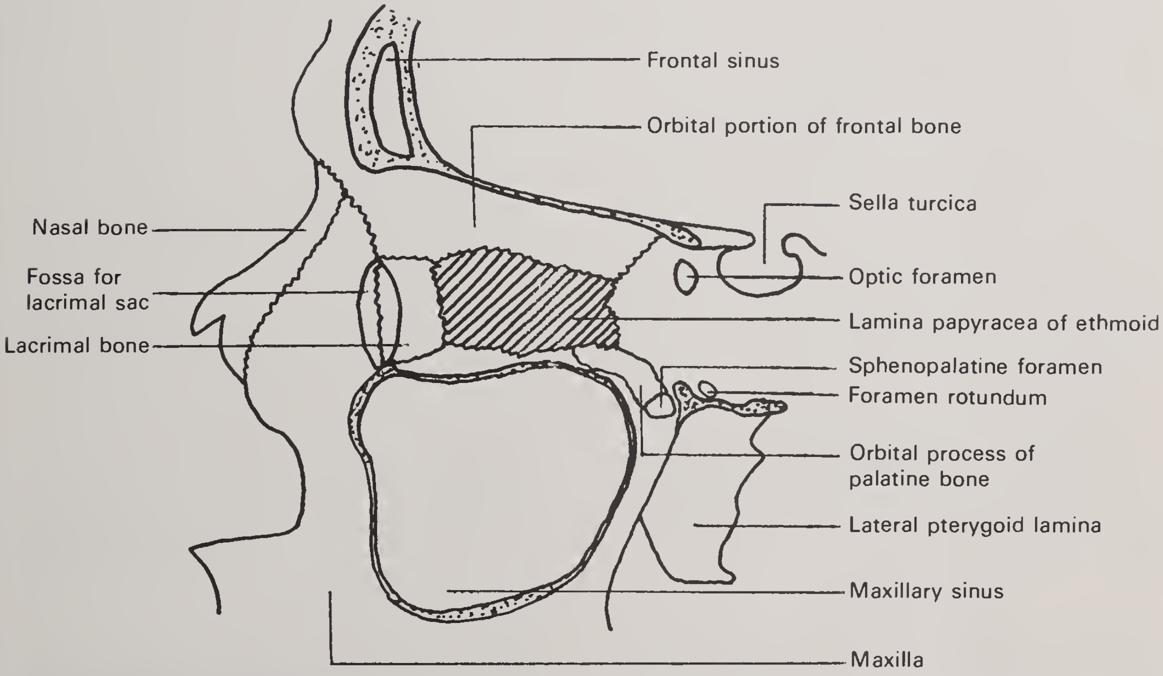

Frontal sinus
Orbital portion of frontal bone
Sella turcica
Nasal bone
Optic foramen
Fossa for lacrimal sac
Lamina papyracea of ethmoid
Lacrimal bone
Sphenopalatine foramen
Foramen rotundum
Orbital process of palatine bone
Lateral pterygoid lamina
Maxillary sinus
Maxilla

FIG. 1. The medial wall of the orbit. The lamina papyracea, through which the medial-wall fractures occur, is shown as the shaded area.

THE FIRST CASE of "blowout" fracture of the orbital floor was described by Land in 1889.[1] Pfeiffer[2] in 1943 postulated that enophthalmos following trauma to the eye was caused by partial displacement of the orbital contents into an orbital-floor fracture. It was not until 1957 that the term "blowout" fracture was coined by Converse and Smith[3] and the mechanism of the fracture fully explained by them as well as by Smith and Regan.[4] Many reports have since appeared concerning the various aspects of this injury. Figure 1 shows the anatomy of the area involved.

The purpose of this paper is to give a brief discussion of orbital-floor fractures, with some illustrative cases, and to present a case of an isolated medial orbital-wall fracture with medial rectus entrapment.

A simple classification of orbital-floor fractures, modified from Converse[5], is (1) pure, with infraorbital rim intact and (2) impure, associated with fractures of adjacent facial bones.

### Mechansim of a Pure "Blowout" Fracture

Trauma to the soft tissue contents of the orbit causes an increase in intraorbital pressure. A "blowout" of the floor or medial wall of the orbit, the thinnest portions, occurs, with herniation of the periocular structures. The inferior rectus and/or inferior oblique muscles are trapped in the lines of the fracture, accounting for the diplopia and restricted movement of the globe. The medial rectus may be entrapped in medial-wall fractures.

### Clinical Findings

The most frequent findings in "blowout" fractures, though varying in order of frequency in various reports[6–8] are:

1. Periorbital ecchymoses and/or emphysema
2. Diplopia on upward gaze
3. Limitation of upward movement of the globe

---

* Resident, Department of Otolaryngology, Washington Hospital Center, 110 Irving Street, N.W., Washington, D. C. 20010.

4. Enophthalmos
5. Downward displacement of the globe.
6. Visual impairment
7. Hypoaesthesia over the distribution of the infraorbital nerve.

### X-ray Diagnosis

Several radiologic techniques, in addition to the routine Caldwell and Waters views and linear tomography, have been advocated. Fueger et al[9] reported 100% success in detecting 18 "blowout" fractures pre-operatively using contrast orbitography. They injected 6 cc of a special preparation along the inferior wall of the orbit. They also developed special plain views which were better than the routine ones. Dodick et al[10] utilized polytomography in 20 cases of suspected "blowout" fracture.

The radiologic findings[11,12] are:

1. Orbital emphysema
2. Periorbital edema
3. Displacement or interruption of bone
4. Cloudiness of the maxillary or ethmoid sinuses
5. Soft tissue mass in the roof of the maxillary sinus (herniated orbital contents).

### Surgical Repair

Most authors agree that the maximum optimum time for surgical exploration of orbital floor fractures following trauma is 7–14 days. An incision is made in the inferior eyelid in a skin fold. The Caldwell-Luc approach is used only if the herniated orbital contents or fracture fragments cannot be freed from above. An alloplastic material such as Teflon, Supramed, methyl methacrylate or silicone is implanted on the orbital floor over the fracture site. Bone grafts are reserved for large defects.

### Report of Cases

Four patients with fractures are presented, 2 as examples of impure orbital-floor fractures and 2 as examples of pure fractures.

Case 1. (Left trimalar and orbital-floor fractures). A 70-year-old white man was beaten about the face 1 day prior to admission. Examination showed swelling and ecchymoses over the left side of the face and eye. There were diplopia and decreased motion of the left eye on upward gaze. The left pupil was lower, and there was loss of the left malar prominence. X-ray films showed a cloudy left maxillary antrum and a left trimalar fracture. Ten days after the injury the patient was operated on through rim and upper lateral brow incisions. The frontozygomatic and infraorbital rim areas were wired. After the contents of the orbit were freed from the floor fracture a silastic sheeting was placed over the defect.

Case 2. (Right nasal bone, infraorbital rim, and floor of the orbit fractures). A 30-year-old Negro man fell and hit the right side of his face and nose on the railing of a flight of steps 1 day before admission. Physical findings included swelling and ecchymoses over the right eye and nose, a palpable step over the right infraorbital rim, deviation of the nose to the left, and a depression of the right nasal bone. X-ray films showed displacement of the medial portion of the infraorbital rim and right nasal bone with slight clouding of the maxillary antrum. Repair was done 4 days after the trauma. The rim and orbital floor fractures were exposed through an infraorbital rim incision. The rim was wired in place and Supramed was placed over the orbital-floor defect. The right nasal bone was elevated and wired externally.

Case 3. (Left "blowout" fracture of the orbital floor). A 44-year old white woman was hit with a fist in the left eye. She had diplopia and limitation of motion of the left eye on upward gaze. X-ray films showed clouding of the left maxillary antrum with fragments of the orbital floor and soft tissue displaced into the antrum (figure 2). At surgery 12 days after the trauma the inferior orbital contents were released from the fracture defect. The latter was covered with Supramed.

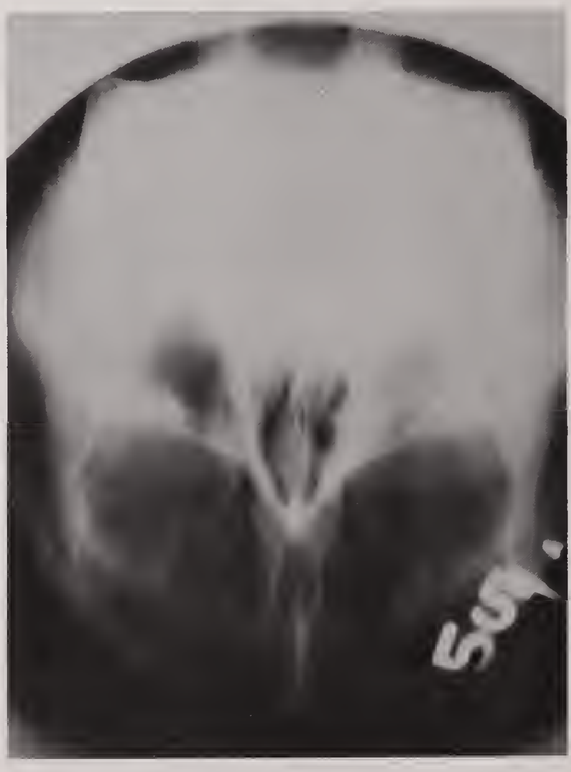


**FIG. 2. Pure "blowout" fracture of the left orbit, showing clouding of the left maxillary antrum with fragments of the orbital floor and soft tissue displaced into the antrum.**

Case 4. (Left "blowout" fracture of the medial orbital wall). A 25-year-old Negro was seen 1 month after being hit in the left eye with an elbow. He had had epistaxis from the left nostril following trauma. Tomograms of the orbit at another hospital had been negative for any fracture. Examination showed diplopia on upward gaze and failure of the left eye to move past the midline on left lateral gaze. There was also slight enophthalmos of the left eye. Because of these physical findings exploration was performed 5 weeks after the injury. Through a rim incision a fracture of the medial wall of the orbit was found. Measuring 1–1.5 cm, the fracture entrapped some of the medial orbital contents. These were released and the defect covered with Supramed sheeting. The orbital floor was intact. Two months after surgery there is still some limitation of motion of the left eye on extreme left lateral gaze, but the enophthalmos and diplopia were relieved.

Ophthalmology consultations were obtained in all cases as part of the initial evaluation.

## Discussion

Discussion will be limited to Case 4, certainly the most unusual, and the one which stimulated the writing of this paper.

"Blowout" fractures of the medial orbital wall are not unusual. Dodick et al[10] studied 20 cases of suspected "blowout" fracture with special tomographic techniques. Of the 14 cases showing an orbital floor fracture, 8 had associated medial-wall fractures (57%). No isolated medial-wall fractures were found, however. Fueger et al,[9] in their series of 53 cases of orbital "blowout" fractures, reported 5 medial-wall fractures (9 per cent) and 13 combination medial-wall and floor injuries (25%). Jones and Evans[13] produced "blowout" fractures experimental in 33 cadaver orbits. There was a fracture of the floor in 23 of the orbits, fractures of the medial wall in 6 (18%), and a combination of the 2 injuries in the remaining 4 orbits (12%).

Despite this frequent occurrence of medial orbital-wall fractures, few cases of entrapment of the medial rectus muscle, with accompanying physical findings, have been reported. Miller and Glaser[14] in 1966 described the retraction syndrome in a case of fracture of the medial wall and floor of the orbit. Retraction of the globe and narrowing of the palpebral fissure with limitation of abduction occurred due to incarceration of the orbital contents in the medial-wall fracture.

Three similar cases have subsequently been reported. One[15] had a fracture of the orbital floor accompanying the medial-wall fracture, while the other [16],[17] involved only a medial-wall injury. Our case would be the third reported isolated fracture of the medial orbital wall with entrapment of the medial contents of the orbit.

Because of recent attention and refined radiographic techniques, more frequent reporting of this entity is anticipated.

Thanks is given to Dr. Joseph Sabri, Dr. Blair Webb and Dr. Miguel Acevedo whose cases were used in this report.

## References

1. LANG, W.: Trans. Ophthal. Soc. U. K., 1889, 9, 41.
2. PFEIFFER, R. L.: Arch. Ophthal., 1943, 30, 718.
3. CONVERSE, J. M. and SMITH, B.: Brit. J. Plast. Surg., 1957, 9, 265.
4. SMITH B. and REGAN, W. F.: Amer. J. Ophthal., 1957, 44, 733.
5. CONVERSE, J. M., ET AL: Plast. Reconstr. Surg., 1967, 39, 20.
6. CONVERSE, J. M., ET AL: Plast. Reconstr. Surg., 1967, 39, 20.
7. GOULD, H. R. and TITUS, C. O.: Amer. J. Roentgen., 1966, 97, 618.
8. LERMAN, S.: Brit. J. Ophthal., 1970, 54, 90.
9. FUEGER, G. F., ET AL: Amer. J. Roentgen., 1966, 97, 614.
10. DODICK, J. M., ET AL: Canad. J. Ophthal., 1969, 4, 377.
11. GOULD, H. R. and TITUS, C. O.: Amer. J. Roentgen., 1966, 97, 618.
12. LERMAN, S.: Brit. J. Ophthal., 1970, 54, 90.
13. JONES, D. E. P. and EVANS, J. N. G.: J. of Laryng., 1967, 81, 1109.
14. MILLER, G. R. and GLASER, J. S.: Arch. Ophthal., 1966, 76, 662.
15. FISCHBEIN, F. D. and LESKO, W. S.: Arch. Ophthal., 1969, 81, 162.
16. EDWARDS, W. C. and RIDLEY, R. W.: Amer. J. Ophthal., 1968, 65, 248.
17. TROKEL, S. L. and POTTER, G. D.: Amer. J. Ophthal., 1969, 67, 772.

# Post-Operative Variations in the Electrophysiology of the Epicardial Onlay Pacemaker Lead*

NICHOLAS P. D. SMYTH, M.D.
SOL LEKAGUL, M.D. AND JOHN M. KESHISHIAN, M.D.

SMYTH ET AL[1] in 1967 described the development of an onlay epicardial synchronous pacemaker lead. During this study atrial potentials and ventricular-stimulating thresholds were measured in the dog at intervals ranging from 1 to 8 months postoperatively.

A modified version of this lead was subsequently developed for use in patients. The lead was inserted intrapericardially by a sutureless technique using a sub-xiphoid approach which avoided the necessity for thoracotomy. The lead was used in 2 patients with a synchronous pulse generator,† and immediate satisfactory synchronous pacing was obtained. However, within 2 to 4 days postoperatively atrial fibrillation ensued in both patients with temporary loss of synchronous pacing. In 1 patient temporary loss of ventricular capture also occurred for a period of several days postoperatively. It was postualted that atrial fibrillation resulted from mechanical irritation of the atrium by the wire-coil atrial electrode (figure 1) and that loss of ventricular capture was due to minimal pericardial effusion separating the onlay electrode from the epicardium. The pericardium had been closed in each case at the time of insertion of the lead.

The present study was undertaken to examine the behavior of the epicardial onlay lead, with modified atrial and ventricular electrodes, in the dog during the first 30 postoperative days, a period not previously studied.

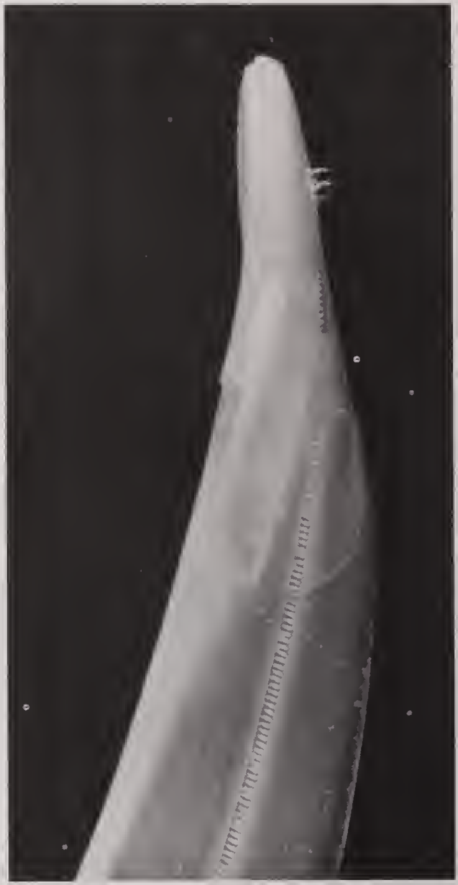


FIG. 1. Detail of epicardial lead showing the Elgiloy wire coils of the atrial electrode projecting 1.5 mm above the surface.

## Methods

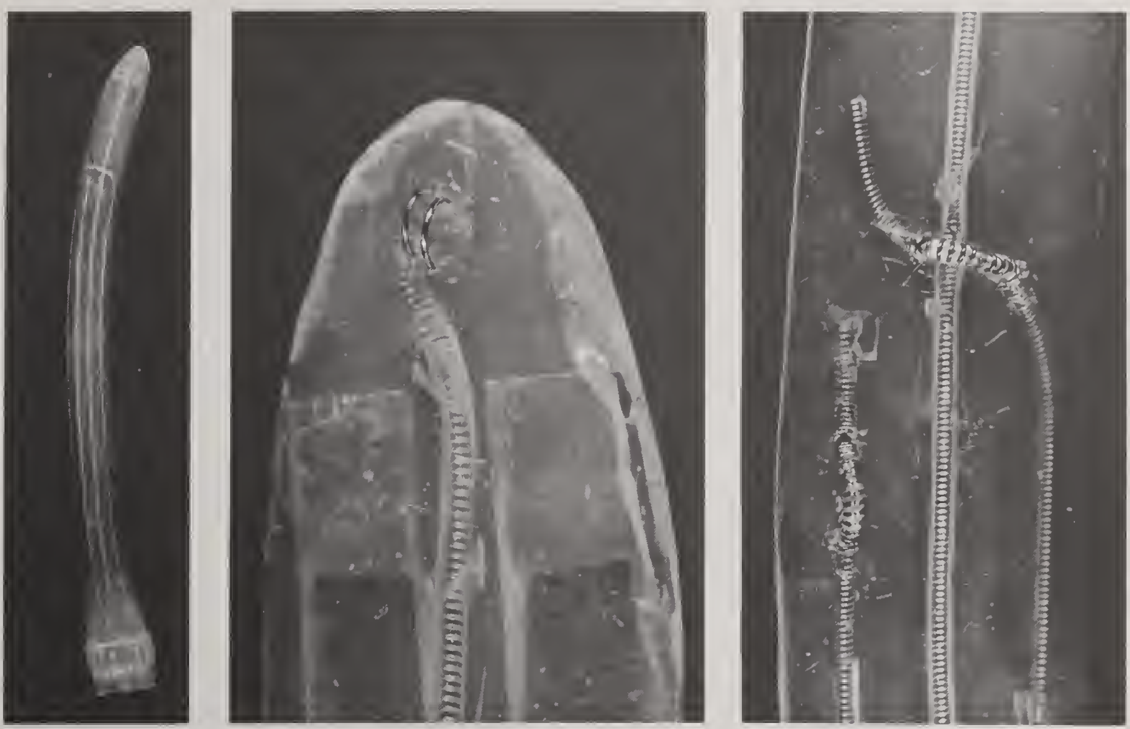
The epicardial lead was modified by rotating the atrial electrode 90 degrees so that the wire-coil loops ran parallel to the long axis of the lead rather than across. In addition, 1 of the ventricular leads was positioned transversely. The other was positioned longitudinally as originally designed (figure 2). The changes were made in order to see if the revised electrodes would perform better, with less irritation, than the original electrodes.

The revised lead was inserted at left thoracotomy in 5 dogs. The lead was placed on the ventrolateral aspect of the right ventricle and left atrial appendage. Pericardial drainage was provided around the lead as it passed through the pericardium. The lead was then brought out below the costal margin on the left side or through any convenient left-lower intercostal space into the subcutaneous position. Here it was attached to a special extension lead (figure 3) which was led around to the back of the dog's neck just above the shoulders. A ground plate (anode) was inserted in the

---

* From the Department of Surgery, Washington Hospital Center, 110 Irving Street, N.W., Washington, D. C., and the George Washington University School of Medicine, Washington, D. C.

†"Atricor," Cordis Corporation, Miami, Florida.



A. B. C.

FIG. 2. A. Revised epicardial lead; B. detail of atrial electrode showing axis of Elgiloy coils rotated 90 degrees. C. detail of ventricular electrodes showing 1 positioned longitudinally and the other transversely.

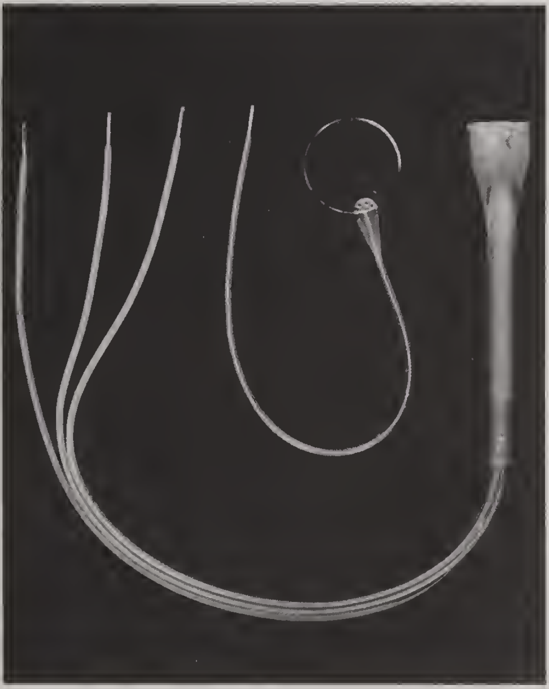


FIG. 3. Extension lead showing plug socket and silastic-covered wire atrial and ventricular electrodes. The extension leads are initially carried in a single casing for greater stability, then continued individually for greater flexibility in positioning terminal electrodes. The separate ground plate (anode) is also shown.

subcutaneous tissue at this point, and all 4 electrode terminals were brought out through the skin. Each electrode terminal was etched with an identifying symbol. The base of the neck, forelimbs, and upper thorax were then encased in a plaster of paris jacket through which the terminals protruded in order to prevent the animal from disturbing them (figure 4).

Atrial potentials and ventricular unipolar and bipolar asynchronous and synchronous stimulating thresholds were measured at the time of insertion of the lead[1,2] and daily thereafter for up to 30 days in the unanesthetized dog. Atrial P-wave potentials were recorded as the sum of the positive and negative deflections on the atrial epicardial electrogram and further checked by noting the point at which synchronous pacing was lost by reducing the atrial sensitivity on a variable parameter external cardiac pacer.* Daily electrocardiograms were also taken.

Benzathine Penicillin G† (1.2 million U.) was given intramuscularly at operation, and an ointment containing Bacitracin, Polymixin B Sulphate and neomycin‡ was frequently applied to the incision through which the electrode terminals emerged.

---

* "Synchrocor," Cordis Corporation, Miami, Florida.

† "Bicillin," Wyeth Laboratories, Philadelphia, Pennsylvania.

‡ "Neosporin," Burroughs Wellcome, Tuckahoe, New York.

At the time of sacrifice a complete autopsy was done. Pericardial fluid was measured and a culture taken. The characteristics of the lead capsule, if present, were noted, and a culture was taken from inside the capsule at the electrode sites and at the point of exit of the electrode terminals through the skin.

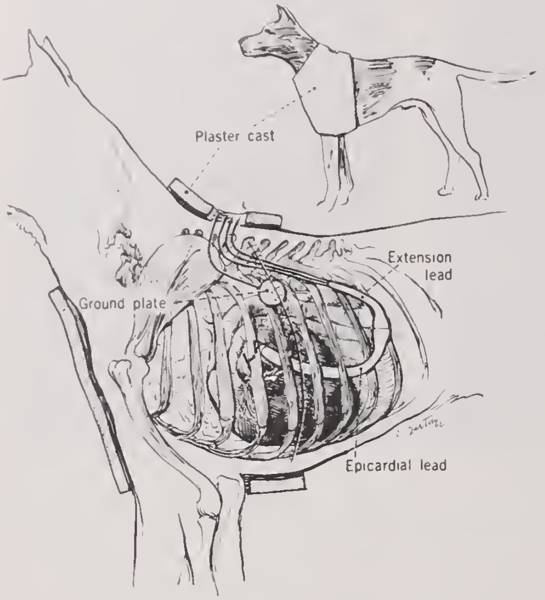


**FIG. 4. Drawing showing the system in place. Location of thoracotomy incision and plaster jacket are also indicated.**

## Results

In all cases pericardial and capsular infection by *Staphylococcus Aureus,* coagulation-positive, developed from 7 to 30 days postoperatively. In 2 animals the electrode positions were not grossly involved by the infection, and satisfactory readings were obtained up to the time of sacrifice at 30 days.

In the first animal ventricular-stimulating thresholds rose rapidly and were very high or unobtainable by the third to the fifth postoperative day. At sacrifice 50 cc of loculated fluid was found in the pericardial sac with separation of the electrodes from the myocardium by the fluid.

In the second animal atrial fibrillation developed on the second postoperative day. Atrial potentials varied widely until the seventh postoperative day when they stabilized with spontaneous reversion to normal sinus rhythm (figure 5). Ventricular-stimulating thresholds in this animal showed the expected degree of rise until the eleventh postoperative day when a sharp rise occurred coincident with the appearance of gross infection. At sacrifice on the eighteenth postoperative day both capsule and pericardium contained 10 to 20 cc of infected fluid.

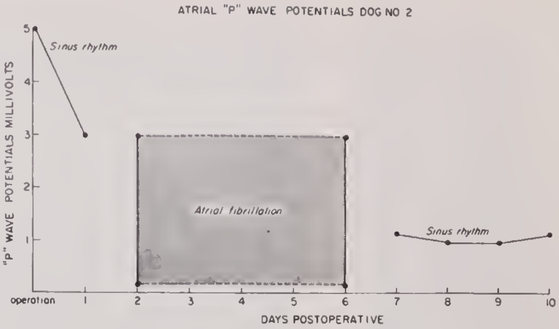


**FIG. 5. Atrial "P"-wave potentials (Dog 2). "F"-wave potentials during period of atrial fibrillation varied from 0.2 to 3 millivolts.**

In the third animal an almost identical condition was seen with a sharp rise in ventricular-stimulating thresholds appearing, coincident with the development of infection, on the eighth postoperative day. The autopsy findings were also the same.

In the fourth and fifth animals satisfactory atrial potentials and ventricular-stimulating thresholds were recorded for the full 30 postoperative days. Ventricular-stimulating thresholds showed the expected early rise to a maximum around 10 days postoperatively with a slight decline or no change thereafter (figure 6). There was no significant difference between the different types of ventricular electrodes. Unipolar thresholds on each electrode ($U_1$ and $U_2$) and bipolar measurements with polarity reversal ($B_1$ and $B_2$) were very similar (figure 6), and there was no significant difference between asynchronous and synchronous thresholds. Atrial P-wave potentials declined rapidly during the first 3 days with little change thereafter (figure 7).

## Discussion

The results in this series of studies show that accumulation of pericardial fluid may cause dissociation of the electrode and epicardium with a sharp rise in threshold and loss of capture early in the postoperative period (dog 1). Also, the protruding wire coils of the atrial electrode, although arranged in a configuration thought to be less irritating, can cause atrial fibrillation even in the normal dog heart (dog 2).

The invariable onset of infection precluded further work with this preparation, but the study did show in 2 animals that satisfactory function was possible in the immediate postoperative period with this lead system. In these animals the decline in

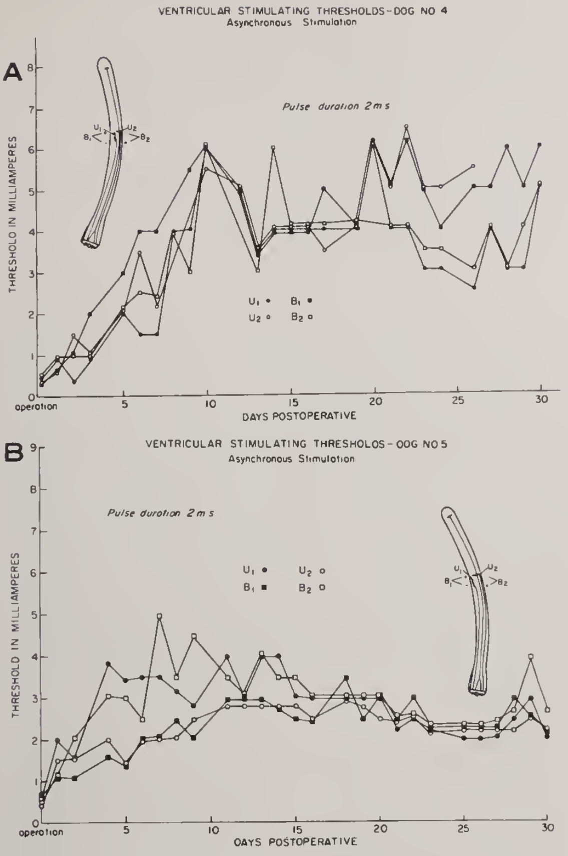


FIG. 6. A Ventricular stimulating thresholds (Dog 4), plotted in unipolar mode for each electrode ($U_1$ and $U_2$), and bipolar mode with polarity reversal ($B_1$ and $B_2$). No loss of capture. Values for $U_2$ are not plotted for 5 days of study because of difficulty in obtaining stable readings. B. Same values plotted for Dog 5. No loss of capture.

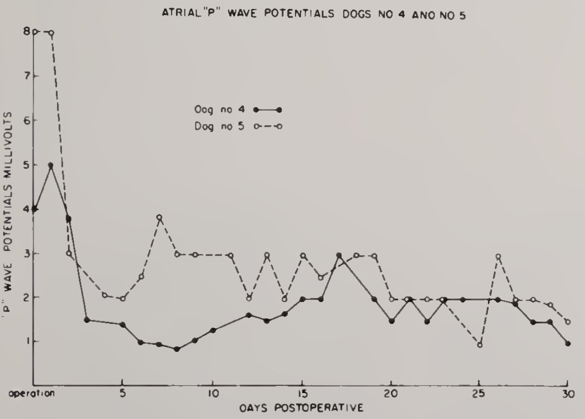


FIG. 7. Atrial "P"-wave potentials plotted in millivolts for Dogs 4 and 5.

recorded atrial potentials was rapid and occurred even sooner than the rise in ventricular-stimulating thresholds. The values for ventricular-stimulating thresholds are very comparable to those obtained by others who used fixed myocardial or epicardial electrodes.[3-7] They are lower than those obtained by us with this type of pacemaker-lead in earlier studies, probably due to the later use of more refined techniques for measuring thresholds.[2]

The problem of pericardial effusion appeared in only 1 animal and should be correctable by better drainage. Although atrial fibrillation appeared in only 1 animal, it appeared in both patients in whom this electrode was used. It is clear that the exposed coil atrial-electrode, whether arranged with the coils parallel to or at right angles to the axis of the lead, is mechanically irritating in an unfixed onlay electrode system and can cause atrial fibrillation. This is unacceptable in a lead system designed for sychronous pacing.

Both atrial and ventricular electrodes have now been re-designed as flat metal plates flush with the surface of the silastic lead. Studies are underway to determine whether this configuration will be less irritating while still retaining acceptable electrical characteristics.

## Summary

The function of an unfixed onlay epicardial synchronous pacemaker lead has been studied in the immediate postoperative period in the dog.

If pericardial drainage is inadequate there is a risk of early loss of ventricular capture because of accumulation of fluid between the lead and the heart.

The exposed coil atrial-electrode is mechanically irritating and may cause temporary atrial fibrillation.

The electrophysiology of the lead is otherwise comparable to that of a fixed epicardial or myocardial elecyrode system.

## References

1. SMYTH, N. P. D., HIRSCH, E. F., BRECHER, I. N., BETANCOURT, R. J., and KELLER, J. W.: An epicardial synchronous pacemaker lead. Ann. Thor. Surg., 1967, 3, 119.
2. SMYTH, N. P. D., BACOS, J. M., and KELLER, J. W.: Experimental and clinical use of a variable parameter cardiac pacer. Dis. Chest., 1968, 53, 93.
3. CHARDACK, W. M., GAGE, A. A., and GREATBATCH, W.: A transistorized, self-contained, implantable pacemaker for the long term correction of complete heart block. Surgery, 1960, 48, 643.
4. CHARDACK, W. M., GAGE, A. A., SCHIMERT, G., THOMSON, N. B., SANFORD, C. E., and GREATBATCH, W.: Two years' clinical experience with the implantable pace-maker for complete heart block. Dis. Chest, 1963, 43, 225.
5. JUDGE, R. D., PRESONT, T. A., LUCCESI, B. R. and BOWERS, D. L.: Myocardial threshold in patients with artifical pacemakers. Amer. J. Cardiol., 1966, 18, 83.
6. JAROS, G. G., MARCHAND, P., MILNER, M., and OBEL, I. W. P.: A long-term study of threshold values and output characteristics of cardiac pacemakers. Thorax, 1967, 22, 63.
7. DAVIES, J. G., and SOWTON, G. E.: Electrical Threshold of the Human Heart. Brit. Heart J., 28: 231, 1966.

# Apparent Inappropriate Anti-Diuretic Hormone Secretion in Cirrhosis of the Liver*

STUART H. DANOVITCH, M.D.
WASEEM SHORA, M.D. AND PETER M. BERKMAN, M.D.

An apparent inappropriate secretion of antidiuretic hormone (ADH) has been postulated to explain a group of abnormalities characterized by (1) hyponatremia with an associated natriuresis, (2) expanded plasma volume unaccompanied by edema, (3) an inappropriately concentrated urine relative to plasma osmolality, and (4) a reversal of these abnormalities associated with restriction of fluid intake.[1-3] Such inappropriate secretion of ADH has been found frequently in association with pulmonary or central nervous-system diseases[1-5] but to our knowledge has never been reported in connection with cirrhosis of the liver.

Although patients with cirrhosis of the liver and ascites may develop hyponatremia during the course of their illness, renal conservation of sodium by such subjects is extraordinary, and as a result they usually have an expanded plasma volume in association with a negligible urinary sodium excretion.[6,7] Inability to excrete a water load has been well documented in these subjects,[8-10] and abnormalities of ADH metabolism have been postulated to explain the inability of the cirrhotic patient to excrete a dilute urine.[11,12] However, altered hepatic catabolism of ADH by cirrhotic subjects associated with increased plasma concentrations of ADH in these patients has not been well documented.[13]

We are reporting the case of a patient who exhibited the features of inappropriate ADH secretion in the presence of apparent cirrhosis of the liver.

## Report of Case

J.P. (WHC 276512), a 50-year-old male Negro, was admitted to the Washington Hospital Center in February 1970 with the chief complaint of weakness, anorexia, nausea, vomiting, and passage of dark urine for several days prior to admission. He admitted to a daily alcohol consumption of 1 pint of whiskey for a number of years. Apart from a recent weight loss and hypertension first noted at another hospital many years previously, there was no significant past history. He had not taken any antihypertensive medications or diuretics for several years.

The patient appeared to be chronically ill and was icteric. Muscle wasting was apparent. The patient was not confused but spoke with a slurred speech. Pertinent findings included a normal blood pressure with no obvious cardiomegaly. The liver was markedly enlarged 11 cm below the right costal margin with a span of 16 cm. A systolic bruit was audible over the liver. The spleen was not palpable. There was no ascites or peripheral edema. Asterixis, unaccompanied by other neurologic abnormalities, was noted.

Laboratory findings on admission included a hemoglobin of 9.6 Gm/100 ml and a hematocrit of 28%. The white blood cell count was 12,300/mm$^3$ with a preponderance of neutrophils. The platelet count was 163,000/mm$^3$, hemoglobin A determined electrophoretically, and a normal red blood cell glucose-6-phosphate dehydrogenase activity. Red blood cell morphology was normal, and red cell indices suggested macrocytosis with a mean corpuscular volume of 101 cubic microns. A serum $B_{12}$ concentration was 860 pg/ml (normal) with a concomitant serum folate concentration of 2 ng/ml (low). The patient excreted 18% (normal) of a dose of radioactively-labeled vitamin $B_{12}$ in 24 hours.

Results of tests of liver function were compatible with chronic liver disease with an initial serum bilirubin concentration of 4.4 mg/100 ml which gradually declined to 2.4 mg/100 ml just prior to discharge. Initial SGOT and SGPT activities were 68 and 12 IU respectively (normals 6-24 and 8-27 respectively) and did not differ substantially throughout the remainder of the patient's hospital course. Serum alkaline phosphatase activity was 3.4 Bessey-Lowry units (normal 0.8-2.3) on admission, declining to 2.2 units at the time of discharge. The patient's initial serum albumin concentration was 1.5 mg/100 ml, associated with a gamma globulin concentration of 2.3 gm/100 ml. There was a persistent prolongation of both prothrombin time and partial thromboplastin time (PTT). Barium sulfate-treated plasma did not correct the prothrombin time abnormality nor did the addition of aged serum correct the PTT. Serum fibrinogen concentration was 267 mg/100 ml. Several serum cholesterol concentrations varied between 150 and 170 mg/100 ml, whereas serum triglyceride

---

* From the Department of Medicine, Washington Hospital Center, 110 Irving Street, N.W., Washington, D. C.

TABLE 1. Serum and Urine Electrolyte Concentrations and Osmolalities

| | SERUM | | | | | | URINE | | |
|---|---|---|---|---|---|---|---|---|---|
| | BUN mg/100ml | Na mEq/L | K mEq/L | Cl mEq/L | $CO_2$ mEq/L | OSM mOsm/L | Na mEq/d | K mEq/d | OSM mOsm/L |
| Normal | 6-20 | 140 | 4.0 | 100.0 | 25.0 | 290 | | | |
| 2/2/70 | 5 | 133 | 3.5 | 93 | 27 | – | – | – | – |
| 2/5/70 | – | 125 | 3.5 | 92 | 25 | 264 | 25 | 39 | 675 |
| 2/7/70 | 4 | 124 | 3.9 | 89 | 23 | – | 46 | 35 | – |
| 2/16/70 | 4 | 122 | 4.2 | 99 | 23 | 252 | – | – | – |
| 2/19/70 | – | 128 | 4.5 | 94 | 21 | 271 | 67 | 133 | 722 |
| 2/21/70 | – | 132 | 4.2 | 102 | 21 | 274 | – | – | – |

concentration was 115 mg/100 ml. The fasting blood sugar was 83 mg/100 ml.

Serum calcium, phosphorus concentrations, and amylase and lipase activities were within normal limits. Two urinalyses were normal with specific gravities of 1.016 and 1.017. Details of serum electrolyte concentrations and renal function are depicted in table 1. Serum sodium concentration was 132 mEq/L. At this time the patient was placed on a sodium restricted diet (2 gm daily) without concomitant fluid restriction. Subsequent determinations of serum sodium concentration revealed values ranging from 122 to 128 mEq/L. Throughout the period of unlimited fluid intake the patient had a persistently low serum osmolality with a high urinary osmolality associated with a natriuresis which varied from 25 to 67 mEq/day despite low serum sodium concentrations. A blood volume determination 3 days after admission revealed an expanded blood volume (4800 ml, normal estimated to be 4300 ml) mostly attributable to an increase in the plasma-volume component (3400 ml, normal estimated to be 2600 ml). A blood volume determination 3 days after admission revealed an expanded total blood volume, attributable to an increase in plasma volume component (table 1). Urinary aldosterone excretion was 12.6 μg/day (pH 1 fraction, normal 2-6 μg/day). The creatinine clearance was 114 ml/min.

Hepatic scintiscans performed with $Au^{198}$ and $I^{131}$ Rose Bengal (figure 1) demonstrated a pattern consistent with cirrhosis, characterized by poor hepatic uptake associated with marked splenic and bone-marrow uptake. Chest X-ray films, barium enema, and upper gastrointestinal X-ray examinations were within normal limits.

Neomycin administration, 8 gm daily, along with dietary protein restriction, was instituted for apparent hepatic precoma but was discontinued prior to discharge. Blood ammonia concentration declined from 91 to 10 μg/100 ml with this therapy. Concomitant with dietary protein restriction the patient lost 4 pounds in weight, which he regained at the time of liberalization of his dietary protein. Otherwise no significant change in weight was noted throughout the hospital course. Coagulation abnormalities previously described did not respond to the administration of vitamin K. On February 19 fluid restriction was started, with a gradual rise in serum sodium concentration to 132 mEq/L, which was accompained by a 100% increased in serum albumin and gamma globulin concentrations. The

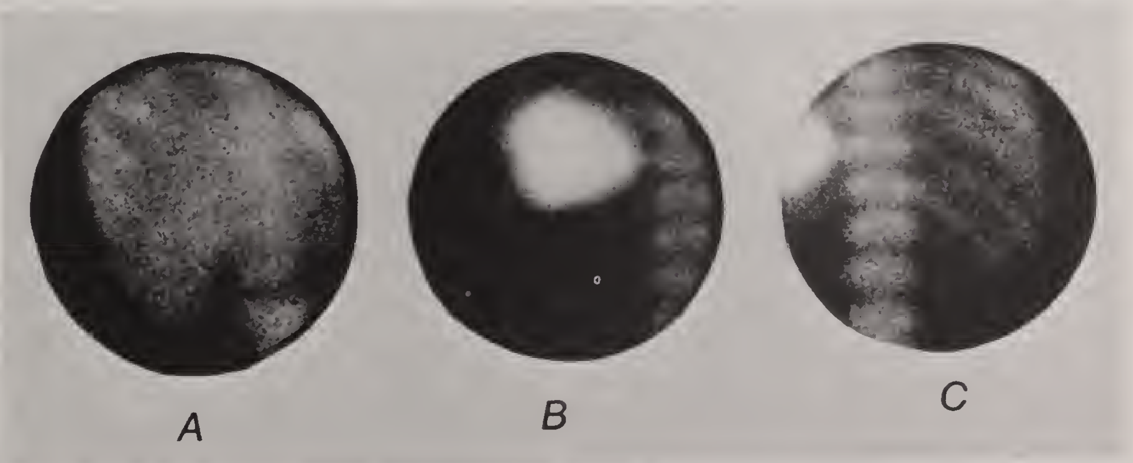


FIG. 1. $Au^{198}$ scintiphotograph of the liver. (A) Decreased hepatic uptake and liver enlargement. (B) Increased splenic uptake. (C) Increased bone marrow uptake in vertebrae and ribs consistent with cirrhosis, portal hypertension, and collateral circulation.

patient failed to return for clinic visits following his discharge from the hospital.

## Discussion

The evidence that this patient exhibited the syndrome of inappropriate secretion of ADH may be summarized as follows. He had a low serum sodium concentration associated with natriuresis, expanded plasma volume without evidence of ascites or edema, and a urine osmolality always in excess of plasma osmolality. There was no history of diuretic therapy or sodium restriction. Renal function was normal throughout the hospital course, as evidenced by normal blood urea nitrogen determinations and a creatinine clearance of 114 ml/min. The possibility of Addison's disease seemed remote in view of the absence of typical signs and symptoms, as well as the presence of an expanded plasma volume and normal urinary aldosterone excretion. Spurious hyponatremia associated with either hyperglycemia or hyperlipidemia was also excluded. Although the low serum sodium concentration returned toward normal with fluid restriction, complete recovery did not ensue and probably represented insufficient fluid restriction in the presence of a persistent abnormality of ADH secretion.

The diagnosis of hepatic cirrhosis in this patient was derived clinically, since persistent coagulation abnormalities precluded performing a biopsy of the liver. The patient had a long history of excessive alcohol intake and at the time of admission was jaundiced with an enlarged liver. The results of laboratory tests were typical of cirrhosis. He had a low serum albumin concentration, high serum gamma globulin concentration, and prolonged prothrombin time associated with minor abnormalities of SGOT, SGPT and serum alkaline phosphatase activities. In addition, the hepatic scintiphotograph was consistent with cirrhosis[14] and demonstrated a pattern which has been correlated with the presence of portal hypertension.[15,16]

Cirrhotic subjects with portal hypertension and low serum albumin concentration are prone to develop ascites, often accompanied by peripheral edema.[17,18] Atkinson and Losowsky[19] presented a formula relating serum albumin concentration and portal hypertension to the formation of ascites as follows: (Serum albumin (gm/100 ml) + 4/Portal pressure (cm $H_2O$))$\geqslant$ 1. If the ratio of this fraction is greater than 1, no ascites will be present, whereas if the ratio of this fraction is less than 1, ascites commonly occurs.[19] Our patient had an initial serum albumin concentration of 1.5 mg/100 ml and probable portal hypertension, based on the scintiscan.[14] If one assumes that his portal pressure was only 30 cm $H_2O$ (a mild elevation), the equation defining conditions in which ascites forms would be appreciably less than 1, but our patient exhibited absolutely no evidence of fluid retention.

It seems likely that the salt-wasting syndrome exhibited by our patient was a result of an inappropriate secretion of ADH. We may speculate whether his syndrome was related to the hepatic precoma and would therefore represent a form of cerebral salt-wasting.[5] The question cannot be answered, however, because he was lost to follow-up after his encephalopathy cleared and before he could be challenged with a normal fluid intake. In any event, this patient developed a salt-wasting syndrome in a setting in which most cirrhotic patients accumulate edema and conserve sodium.

The rarity of such salt-wasting by the cirrhotic subject in the presence of an expanded plasma volume has led some investigators to suggest that there is a defect in some third factor release by the cirrhotic patient which prevents him from responding normally to plasma hyperexpansion.[20,21] In contrast to the usual patient with cirrhosis, hypoalbuminemia and portal hypertension, our patient responded normally to his expanded plasma volume with a natriuresis. It would be most important to understand the factors responsible for the sodium wasting in this situation since this may provide a clue as to why other cirrhotic patients fail to waste sodium and are thus more prone to fluid retention.

## Summary

A 50-year-old Negro male with probable cirrhosis of the liver accompanied by marked hypoalbuminemia and portal hypertension was noted not to have ascites and edema. Concomitant features of inappropriate antidiuretic hormone secretion were detected, and it is speculated that this syndrome in this patient may represent a form of cerebral salt-wasting secondary to hepatic precoma.

## References

1. SCHWARTZ, W. B., BENNETT, W., CURELOP, S., and BARTTER, F. C.: Amer. J. Med., 1957, 23, 529.
2. GOLDBERG, M.: Amer. J. Med., 1963, 35, 293.
3. BARTTER, F. C., and SCHWARTZ, W. B.: Amer. J. Med., 1967, 42, 790.
4. SIMS, E. A. H., WELT, L. G., ORLOFF, J., and NEEDHAM, J. W.: J. Clin. Invest., 1950, 29, 1545.
5. CARTER, N. W., RECTOR, F. C., JR., and SELFIN, D. W.: New Eng. J. Med., 1961, 264, 67,
6. BALDUS, W. P., FEICHTER, R. N., and SUMMERSKILL, W. H. J.: Ann. Intern. Med., 1964, 60, 353.
7. REYNOLDS, E. B., LIEBERMAN, F. L., and REDEKER, A. G.: Medicine, 1967, 46, 191.

*(Continued on page 60)*

# Heparin Therapy in Meningococcal Thrombocytopenic Coagulopathy*

LAWRENCE E. PIERCE, M.D.,
LEONARD D. CUTLER, M.D., AND JAMES A. CURTIN, M.D.

SEPTICEMIA and/or endotoxemia is a known stimulus of disseminated intravascular coagulation (DIC) which may lead to a rapid and fatal conclusion when complicating meningococcemia.[1] The most frequent coagulation abnormality accompanying sepsis has been thrombocytopenia.[2,3] It appears early in the patient's course as a result of toxin-induced platelet aggregation with formation of occulsive platelet thrombi and liberation of thromboplastin sufficient to precipitate DIC.[4] A primary and immediate manifestation of DIC is shock, and heparin pre-treatment has been significantly effective in protecting animals against DIC and death in experimentally produced irreversible hemorrhagic or endotoxic shock.[5] It is suggested that thrombocytopenia, when accompanied by prolongation of the partial thromboplastin time (PTT), prothrombin time (PT), coagulation time (CT) and thrombin time (TT) in proven or suspected meningococcemia signals a need for heparin anticoagulation if irreversible shock is to be avoided.

In the 2 cases reported here definite but moderate prolongation of screening coagulation studies with thrombopenia accompanied by recurrent showers of dermal petechiae and purpura prompted early heparin therapy with gratifying results.

## Report of Cases

Case 1. A 17-year-old Negro male high school student was hospitalized with a 1-day history of fever, chills, malaise, headache, urethral discharge, and severe arthralgia of both knees and ankles. On the morning of admission he complained of sore throat and marked aching of both wrists and all metacarpophalangeal joints. He was well-developed and well-nourished with an oral temperature of 103.4°F, respirations of 28 per minute, and blood pressure of 100/60 mm/Hg with a sinus tachycardia of 134 beats per minute. The sensorium was clear and the neck supple without adenopathy. Positive findings were 20 to 25 petechiae of the soft palate, marked tenderness to palpation and motion of the knees, ankles, wrists, and metacarpophalangeal joints, and multiple dermal petechiae of the palms, soles, back, arms, and legs.

The hematocrit was 43% and the white blood cells numbered 9,025 per cmm (70% neutrophils, 16% band forms, 3% metamyelocytes, 7% lymphocytes, and 4% monocytes). Peripheral smear was normochromic and normocytic; small erythrocyte fragmentation was absent and platelets were decreased, Urinalysis revealed 1+ proteinuria, pH 5.0, specific gravity 1.020, and 3-5 WBC and 5-7 RBC per high power field. Smears obtained from a purpuric hand lesion revealed Gram-negative diplococci (figure 1.). Lumbar puncture fluid was cloudy with protein of 320 mg per 100 ml; there were 7,000 white blood cells per cmm (neutrophils 98%), and the sugar was 49 mg per 100 ml (blood sugar drawn simultaneously during 5% glucose in water intravenous infusion was 200 mg per 100 ml). Two blood cultures and a nasopharyngeal culture grew *N. meningitidis*; cerebrospinal fluid culture was negative. The patient was given 2.4 million units of intravenous penicillin every 3 hours.

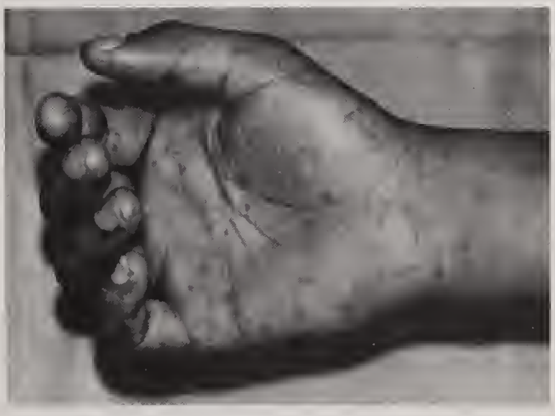


**FIG. 1. Typical meningococcal petechiae of the hand in Case 1. Smear from lesion was positive for Gram-negative diplococci.**

On the 2nd day the ECG showed a wandering pacemaker and nodal beats with aberrancy suggestive of myocarditis. There was significant thrombocytopenia (50,000/mm$^3$) and modest prolongation of PTT, PT, and CT with normal fibrinogen but abnormal Fibrindex. On the 3rd

---

* From the Department of Medicine, Washington Hospital Center, 110 Irving Street, N.W., Washington, D. C.

TABLE 1: Coagulation Studies at Time of Starting and Concluding Heparin Therapy.

| | Normal | Case 1 | | Case 2 | |
|---|---|---|---|---|---|
| Date | | 3-22-69 | 3-28-69 | 8-30-69 | 9-5-69 |
| Heparin 10,000u IV q6hr | | Begin | End | Begin | End |
| Coagulation time (min) | <15 | 31 | 15 | 45 | 14 |
| PTT (sec) | <45 | 79 | 39 | 101 | 39 |
| PT (sec) | 12 | 21 | 14 | 26 | 13 |
| Platelets (mm$^3$ × 10$^3$) | 150–325 | 25 | 307 | 2.5 | 272 |
| Fibrinogen (mg/100ml) | 150–350 | 321 | 504 | 316 | 531 |
| Fibrindex (sec) | <60 | >100 | 12 | 60 | 10 |
| Fibrin Degradation | Neg | Neg | Neg | Neg | Neg |
| Euglobulin clot lysis | 6 hr | Normal | Normal | Normal | Normal |

hospital day fresh showers of dermal petechiae appeared, the PTT became further prolonged, and platelets decreased to 25,000 per cmm. Heparin was then administered in a dosage of 10,000 u every 6 hours intravenously (table 1). No subsequent petechial showers occurred. Serum complement was normal (270 mg per 100 ml) and plasma cortisol high-normal (22 μg per 100 ml). Another lumbar puncture on the 7th hospital day when platelets were greater than 100,000 per cmm revealed a spinal fluid protein of 62 mg per 100 with 195 white blood cells (76% neutrophils). Gram stain and culture were negative. The temperature ranged between 100-102°F until the 10th day when the involved joints became asymptomatic. The patient spent an additional uneventful 10 days of convalescence while receiving reduced dosages of intramuscular and later oral penicillin.

Case 2. A 43-year-old male Negro security guard had complained of exertional dyspnea and headache 3 days prior to hospitalization. The next day he noted generalized soreness of the muscles and joints precluding sleep. On the day of admission he experienced shaking chills, developed a sore throat, and observed a peripheral petechial rash. He smoked 1 pack of cigarettes daily and drank 1 quart of ethanol weekly.

He was well-developed and well-nourished. The oral temperature was 103°F, respirations 24 per minute, blood pressure of 80/60 mm/Hg, and a sinus tachycardia of 125 beats per minute. The sensorium was clouded. Positive findings were bilateral palpebral conjunctival petechiae, petechiae and purpura of the skin of the trunk and extremities, early gangrenous changes of the tips of the toes, and hyperresonance of both lungs with diffuse inspiratory rales maximal in the posterior bases.

The hematocrit was 40% and white blood cells 4,450 per cmm (60% neutrophis, 10% band forms, 6% metamyelocytes, 10% lymphocytes and 6% monocytes). Peripheral smear was normochromic. There was no abonormal erythrocyte fragmentation, and the platelets were adequate. Lumbar puncture fluid was clear and acellular; 3 blood cultures were positive for *N. meningitidis*, Group C. Therapy was instituted with 24 million units of intravenous penicillin daily.

By the evening of admission the platelets had fallen from 160,000 per cmm to 14,500 and still later that same evening to 2,500 per cmm, accompanied by increasing granulopenia and abnormal screening coagulation studies (table 1). Heparin was begun, and 4 units of platelet concentrate and 2 units of whole fresh blood were infused the following day when the platelet count was 3,200 per cmm and the hematocrit 30%. The blood alcohol was negative, and plasma cortisol was greatly increased to 70 μg per 100 ml (normal 3–25 μg per 100 ml). Vital signs stabilized and the sensorium cleared over the next 24 hours. The most extensive skin lesions about the elbow pressure points became confluent, sloughed, and healed by secondary intention (figure 2.). The toes improved slowly but completely, and the patient was discharged as recovered after 27 hospital days.

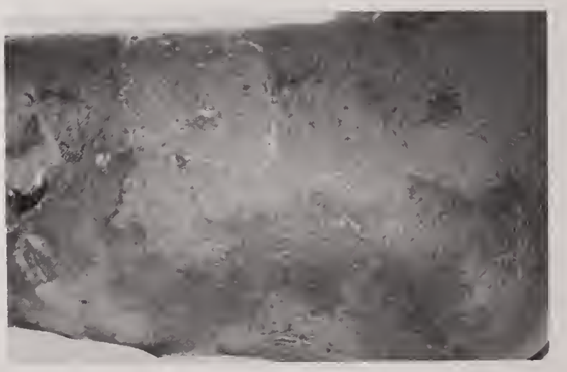


**FIG. 2. Larger confluent skin lesions above and below elbow in Case 2 which progressed to necrotic ulceration and slough.**

## Discussion

Vascular endothelial necrosis with thrombotic fibrin-strand occlusion of cutaneous vessels has been a regular occurrence in the pathologic lesions of fatal meningococcemia; organisms are readily found in these vasculitic lesions and thrombocytopenia documented in some.[6] In addition, the striking presence of capillary thrombi in multiple internal organs has been suggested as an alternate explanation to adrenal hemorrhage as the basis for peripheral vascular collapse accompanying meningococcemia.[7] In recognition of these thrombotic complications, McGehee et al[1] anticoagulated with heparin 6 consumptive coagulopathy meningococcal patients. Unfortunately, 5 died in fulminant endotoxic shock with autopsy evidence of adrenal hemorrhage and microthrombi. One patient with equivocal coagulation abnormality survived when heparin was begun early in the course, and an additional patient with a pre-existing circulating anticoagulant significantly survived despite severe thrombocytopenia without benefit of exogenous anticoagulation. Evans et al[8] described 5 similar fatal instances of menigococcal sepsis with intravascular consumption. Coagulopathy played an important role despite heparin therapy in the single mortality reported by Dennis et al[9] and in 3 deaths during a Fort Jackson, South Carolina, epidemic (table 2).[10]

In these fatal cases the patients' disease was often so rapidly progressive that either time was inadequate for heparin to improve hemostasis or the patient had already entered the terminal stages of his disease prior to heparinization. During endotoxemic consumptive coagulopathy, definitive documentation by screening coagulation testing (individual factor testing frequently being unavailable) cannot always be conclusively demonstrated prior to the development of severe and often fatal endotoxic shock.[1] One of the best differential diagnostic criteria for the presence of endotoxemia is thrombocytopenia; the drop in platelets occurs before the onset of DIC and before the decrease in the levels of fibrinogen.[11]

If heparin therapy should be delayed in the belief that a sepsis-associated coagulation profile must include the presence of hypofibrinogenemia and even fibrin split products, the mortality due to shock can only be increased. Fibrinogen has been less severely affected in infection[12,13] than when associated with other inducers of intravascular clotting and may at times be normal. Significantly, the more nearly normal fibrinogen levels have been associated with an increased rate of survival (table 2).

Despite both patients' normal fibrinogen levels at the time heparin treatment was begun, the fibrinogen after heparinization increased by 60% suggesting relative hypofibrinogenemia during the early phases of illness. The maintenance of plasma fibrinogen may be attributable to endotoxemia and to increased fibrinogen production which is stimulated by a declining circulating fibrinogen level. The injection of *E. coli* endotoxin into dogs does not significantly reduce fibrinogen levels.[14] Fibrin degradation products have been present in only a single reported (fatal) instance of meningococcal coagulopathy and normal fibrinolytic screening and euglobulin clot lysis times, when obtained, have confirmed the major difficulty to be intravascular clotting rather than excessive fibrinolysis (table 2). This is in keeping with the observation that DIC causes only moderate decreases in fibrinogen but that when fibrinolysis is superimposed, afibrinogenemia results.[15] Since the liver and reticulo-endothelial system assume the central role in removing the products of fibrinolysis from the circulation[16] it is more reasonable to anticipate their demonstration with afibrinogenemic fibrinolytic shock when blood is shunted away from the liver. Additional factors than heparin, such as age, associated disease, duration of illness prior to medical observation, and availability of supportive measures for rehydration, antibiotic administration, and blood replacement are all probably important determinants in the patient's final outcome. In this regard, 2 pediatric patients in shock with unequivocal evidence

**TABLE 2: Treatment Results and Selected Coagulation Studies in Meningococcal Patients Having Disseminated Intravascular Clotting.***

| | | | | | | Fibrinogen (mg/100 ml) | | | |
|---|---|---|---|---|---|---|---|---|---|
| Author | Year | No. Pts | No. Deaths | Heparin-Treated | Heparin-Treated with Survival | In Survivor | Range all Pts | Euglobulin Clot Lysis | FDP |
| McGehee | 1967 | 6 | 5 | 5 | 1 | 380 | 30–380 | | |
| Abilgaard | 1967 | 1 | 0 | 1 | 1 | 92 | | Normal | |
| Holland | 1968 | 1 | 0 | 1 | 1 | 145 | | | |
| Dennis | 1968 | 1 | 1 | 1 | 0 | | 55 | | + |
| Winkelstein | 1969 | 6 | 3 | 3 | 3 | | | | |
| Evans | 1969 | 5 | 5 | 3 | 0 | | 50–77 | Normal | – |
| Present | 1970 | 2 | 0 | 2 | 2 | 316 (19) | | Normal | – |
| | | | | | | 320 | | Normal | – |

* The constant abnormalities of thrombocytopenia and prolonged PTT and PT are omitted.

of intravascular coagulation have survived when treated with heparin and the previously listed supportive measures.[12,13]

Eventually intravascular clotting produces a characteristic deficiency of plasms clotting factors (I, II, V and VIII) with thrombocytopenia in addition to a later activation of the fibrinolytic system with the subsequent appearance of fibrin degradation products.[17] This in-vivo conversion of circulating plasma toward sera results in a hemorrhagic diathesis with variable prolongation of CT, PTT, PT and thrombin time. It has also become apparent that the previously mentioned screening studies of PTT, PT, and CT (but not thrombin time) may be abnormal early in consumptive disorders secondary to decreases in Vitamin K-dependent hepatic factors rather than to decreases in the consumable Factors I, II, V, and VIII.[3,18] At this critical point in the dynamic process of consumptive coagulopathy shock is not usually present, but platelets are almost always depressed and falling, and shock is usually not far behind.[15] It would appear that, once hypotension has developed, circulatory stasis favors thrombosis. With an accelerated depletion of consumptive factors the screening clotting studies become obviously abnormal, secondary fibrinolysis is vigorously activated, and fibrin split-products are almost regularly demonstrated. At this stage it cannot be anticipated that heparin will regularly reverse this process. Therefore, although an abnormal PTT, PT and coagulation time in association with thrombocytopenia early in the patient's course may not give specific information as to the individual factor depletion, they suggest that DIC is present,[17] that shock is imminent,[4] and that heparin therapy is warranted to prevent a fatal outcome.

## Summary

Two patients with meningoccal thrombocytopenia and screening plasma-coagulation studies consistent with disseminated intravascular clotting treated with heparin early in their course recovered without sequelae. Intravascular clotting in endotoxemia is a dynamic pathologic process; hypofibrinogenemia and circulating fibrin-split products may be demonstrated only late in the course and in association with secondary fibrinolysis and terminal shock. Heparin therapy at that stage may not be effective. Earlier treatment suggested by increasing thrombocytopenia and prolongation of screening coagulation studies (coagulation time, partial thromboplastin time, prothrombin time, and thrombin time or an equivalent) may result in greater salvage of these seriously ill patients.

## References

1. MCGEHEE, W. G., RAPAPORT, S. I., and HJORT, P. F.: Ann. Intern. Med., 1967, 67, 250.
2. COHEN, P., and GARDNER, F. H.: Arch. Intern. Med., 1966, 117, 113.
3. CORRIGAN, J. J., RAY, W. L., and MAY, N.: New Eng. J. Med., 1968, 279, 851.
4. HARDAWAY, R. M.: Syndromes of disseminated intravascular coagulation. Springfield, Illinois: Charles C Thomas, 1966, p. 219
5. HARDAWAY, R. M.: Syndromes of disseminated intravascular coagulation. Springfield, Illinois: Charles C Thomas, 1966, p. 128.
6. HILL, W. R., and KINNEY, T. D.: J.A.M.A., 1947, 134, 513.
7. FERGUSON, J. H., and CHAPMAN, O. D.: Amer. J. Path., 1948, 24, 763.
8. EVANS, R. W., GLICK, B., KIMBALL, F., and LOBELL, M.: Amer. J. Med., 1969, 46, 910.
9. DENNIS, L. H., COHEN, R. J., SCHACHNER, S. H., and CONRAD, M. E.: J.A.M.A., 1968, 205, 133.
10. WINKELSTEIN, A., SONGSTER, C. L., CARAS, T. S., BERMAN, H. H., and WEST, W. L.: Arch. Intern. Med., 1969, 124, 55.
11. BELLER, F. K.: The role of endotoxin in disseminated intravascular coagulation. Stuttgart: F. K. Schattauer, 1969, p. 139.
12. ABILGAARD, C. F.: Pediatrics, 1967, 40, 78.
13. HOLLAND, P., BOBO, M. F., and SHACKELFORD, E.: J. Kentucky Med. Ass., 1968, 66, 807.
14. WALSH, R. T., and BARNHART, M. I.: Clearance of coagulation and fibrinolysis products by the reticuloendothelial system, in disseminated intravascular coagulation. Stuttgart: F. K. Schattauer, 1969, p. 90.
15. MCKAY, D. G., KLIMAN, A., and ALEXANDER, B.: New Eng. J. Med., 1959, 261, 1150.
16. MCKAY, D. G., and SHAPIRO, S. S.: J. Exp. Med., 1968, 107, 355.
17. BACHMANN, F.: D. M., 1969, December, p. 11.
18. GILCHRIST, G. S., LIEBERMAN, E., EKERT, H., FINE, R. N., and GRUSHKIN, C.: Lancet, 1969, 1, 1123.
19. RATNOFF, O.D., and MENZIE, C.: J. Lab. Clin. Med., 1951, 37, 316.

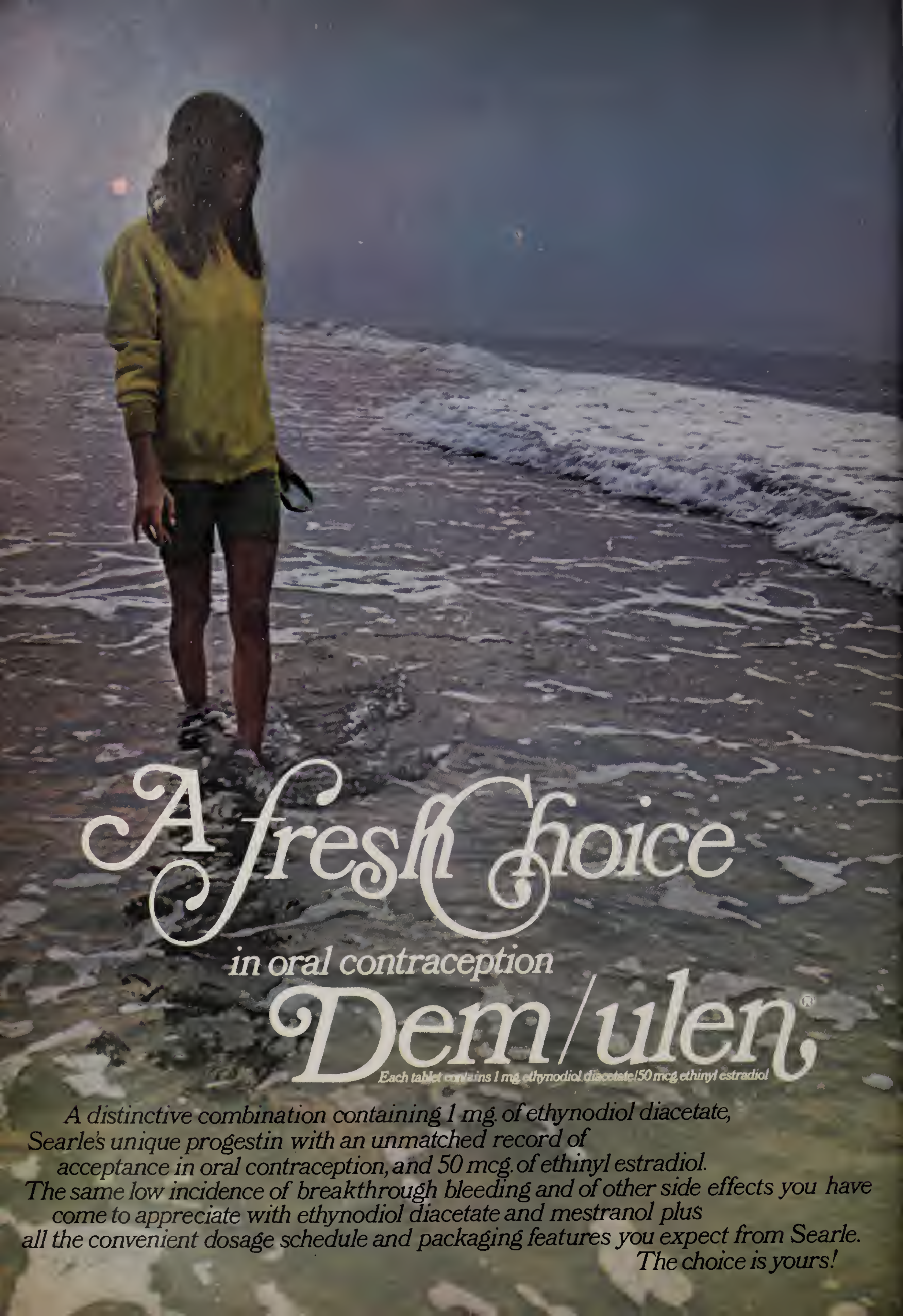
## PROTEIN CONTENT / 7 oz. Serving*

| | | | |
|---|---|---|---|
| Bean with Bacon | 6.8 | Green Pea with Ham (Frozen) | 7.6 |
| Beef | 8.0 | Hot Dog Bean | 8.4 |
| Chicken Broth | 5.5 | Pepper Pot | 6.1 |
| Chicken 'N Dumplings | 5.8 | Split Pea with Ham | 10.2 |
| Chili Beef | 6.2 | Vegetable Beef | 5.0 |
| Green Pea | 6.9 | Vegetable with Beef (Frozen) | 5.4 |

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

# There's a soup for almost every patient and diet ..for every meal and, it's made by Campbell



A fresh Choice

in oral contraception

Dem/ulen®

Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

*A distinctive combination containing 1 mg. of ethynodiol diacetate,
Searle's unique progestin with an unmatched record of
acceptance in oral contraception, and 50 mcg. of ethinyl estradiol.
The same low incidence of breakthrough bleeding and of other side effects you have
come to appreciate with ethynodiol diacetate and mestranol plus
all the convenient dosage schedule and packaging features you expect from Searle.
The choice is yours!*

# A fresh Choice

## in oral contraception

# Dem/ulen®

Each tablet contains 1 mg ethynodiol diacetate/50 mcg ethinyl estradiol

*Actions*—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

*Special note:* Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision. Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

*Indication*—Demulen is indicated for oral contraception.

*Contraindications*—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

*Warnings*—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

*Precautions*—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

*Adverse reactions observed in patients receiving oral contraceptives*—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions; neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in $T^3$ uptake values; metyrapone test and pregnanediol determination.

*References: 1.* Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*: 267-279 (May) 1967. *2.* Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. *3.* Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. *4.* Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

0A4

**SEARLE** **Where "The Pill" Began**
**G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680**

# Mylanta®
# 24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

**Mylanta®**
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart
PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

# President's Page

## MEDICINE FOR THE SEVENTIES

It's a whole new ballgame. The entire medical-social-economic spectrum is changing. Our obligations have expanded. The needs of our society have expanded also. Physicians are pressured from all sides to do more—and we must. No longer is it enough to just care for the sick.

A few of our more obvious problems other than the treatment of patients include the following: preventive medicine, patient education, community education, health care delivery systems, drug abuse control, cost of medical care, shortages of physicians, shortages of all paramedical personnel, failing medical schools, and problems of peer review and quality control, to name a few.

In the past year there is hardly a magazine or newspaper that hasn't published unfavorable articles about medicine in general and doctors in particular. Even Ralph Nader has joined the bandwagon. Our initial response is to rear back, bristle and become defensive; but on second thought some of these criticisms are justified, and as such some changes must be made.

If we are to maintain the highest standards of professional care and medical ethics we must continue to be ever vigilant. The increased demands made upon our committees on utilization, fee review, grievance, and ethics are of growing concern. The number of complaints and the nature of these charges raise serious questions about our primary interests and our primary responsibilities.

The entire malpractice problem, with increased frequency of suits, rising insurance rates, and difficulty in obtaining adequate coverage, bears a relationship to our methods and standards of practice.

Medicine is changing, and people's attitudes toward medicine are changing also. We have to develop a new order of priorities—priorities as a profession and priorities within our own society. We can no longer sit back and enjoy the benefits of our profession, saying that we have worked hard in the past and made our sacrifices, without being concerned for the present and the future. These are changing times we live in, and we must be as flexible and fluid as the circumstances require.

Whole new concepts of health delivery systems are being proposed. Independent foundations are being considered for purposes of peer review. These are but two changes of significance on the imminent horizon.

Some people say the future for medicine is bleak; others say changes are coming. Let's be part of that change; let's help mold these changes so that they serve the best interests of the people while preserving the highest standard of medical practice. We are in a most unique position. We live in the very center of this controversy, in the eye of the hurricane so to speak, and as such can act as a force for good in helping to bring about the kind of changes we support.

The changing patterns of medical practice in the Metropolitan Washington community have resulted in a marked decrease in new, young physicians starting practice within the city. Although this is readily understandable, considering the opportunities in the suburbs, it is of growing concern to us that new blood is needed. The young physician has much to learn from his elders, but he has also much to offer. He has fresh ideas about our responsibilities to each other and to society. He has interest and enthusiasm and an open mind. We must find ways to attract and to retain new young physicians if our society is to remain viable in the future.

These are but some of the challenges facing us. Are we equal to the task? I hope so. As your president I am going to make demands upon you, and I feel confident you will respond affirmatively.

Marvin C. Korengold

MARVIN CURTIS KORENGOLD, M. D.
President, The Medical Society of the District of Columbia, 1971

## Marvin Curtis Korengold, M.D.

The 104th President of the Medical Society of the District of Columbia, Dr. Marvin C. Korengold, assumed his new office on January 1, 1971.

Dr. Korengold is a native of Minnesota, born in Minneapolis on October 27, 1923. From the University of Minnesota he received a D. D. S. degree in 1945; a B. S. in 1947; an M. B. in 1949; and an M. D. in 1950. In 1949 he was recipient of the Medical-Dental Award from the University of Minnesota. He served residencies at the Minneapolis Veterans Hospital from 1950 to 1952 and at the University of Minnesota from 1952 to 1953.

Two years prior to beginning practice in the District of Columbia in July 1955 Dr. Korengold was among the first staff as a Clinical Associate in Neurological Diseases and Blindness at the National Institutes of Health in Bethesda, Maryland. He has continued there on a consulting basis. While at N. I. H. he was also an instructor in Neurology at Georgetown Medical School. In 1955 he became clinical instructor in Neurology at the George Washington University School of Medicine. He maintains affiliations with the George Washington University Medical Center, the Washington Hospital Center, Sibley Memorial Hospital, and the Surburban Community Hospital.

From 1955 until 1967 Dr. Korengold was a consultant in Neurology at the Veterans Administration Outpatient Department. He also served as Neurological Consultant to the U. S. Department of State, the Montgomery County, Maryland Health Department, and the D. C. Department of Vocational Rehabilitation.

Within the Medical Society of the District of Columbia Dr. Korengold served as Chairman of the Section on Neurology, Neurosurgery and Psychiatry for 1958. A decade later, in 1968, he served a second term as Chairman of that Section. He has been Chairman of the Health Foundation and a member of the Regional Medical Program Committee, as well as President-elect for 1970.

In 1964 Dr. Korengold was Chairman of the Mass Polio Immunization Program, which immunized over 1 million people in the Washington Metropolitan area. That same year he received the "Community Service Award" of the Medical Society of the District of Columbia.

He is a member of the Board of Trustees of the Community Psychiatric Clinic in Montgomery County, Maryland. Dr. Korengold is also a member of the Advisory Board and the Board of Trustees of the Multiple Sclerosis Society of Washington, and is a member of the Advisory Board of the Epilepsy Foundation of America. His most current involvement is as Head of the recently organized "Stroke Program" for the new Metropolitan Hospital for Extended Care (see ANNALS, November 1970, p. 647). In addition to belonging to the Medical Society of the District of Columbia, he holds membership in the American Medical Association, the American Academy of Neurology, and the American Epilepsy Society.

Dr. Korengold is married to the former Helen Gerler of New York. The Korengold's, who reside at 9001 Burdette Road in Bethesda, have 4 children: George, a junior medical student at George Washington University; Daniel, a sophomore at Trinity College in Hartford, Connecticut; Karen, a freshman at Fisher Junior College in Boston; and Thomas, a student at Landon Preparatory School in Bethesda.

A political independent, Dr. Korengold's leisure interests include tennis, golf, jazz, and an occasional mystery novel.

Dr. Korengold promises to be a man of the 70's with his active involvement in getting the job done! The Society is fortunate in having for its new President a person of Dr. Korengold's capabilities.

Remember when you went to Peoples in a horse and buggy to get a prescription filled? We do.

***120 million prescriptions later, Peoples still remembers that all prescriptions must be filled one at a time.***

Since 1905, all Peoples Drug Stores have filled more than one hundred twenty million prescriptions. We can't help but mark this impressive number with some justifiable pride. We think it's a real tribute to peoples' confidence in Peoples.

We remember those horse-and-buggy days. Of course, many things have changed. The drug industry has come a long, long way. The skills of the prescribing physician have become much more sophisticated. But, one thing has remained constant. A pharmacist still fills every prescription—one at a time. For, the *next* prescription we fill for you is every bit as important as all 120 million that came before.

**PEOPLES**®

PRESCRIPTION DRUG STORES

IF YOU HAVE CHILDREN ASK FOR A "SAFETY CAP" CONTAINER WHEN PEOPLES DRUG FILLS YOUR PRESCRIPTIONS.

# The girth control pill

# Tepanil® Ten-tab

(continuous release form)

## (diethylpropion hydrochloride)

## works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

**Contraindications:** Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

**Warning:** Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

**Adverse Reactions:** Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

# Painful night leg cramps...

## unwelcome bedfellow for any patient— including those with arthritis, diabetes or PVD

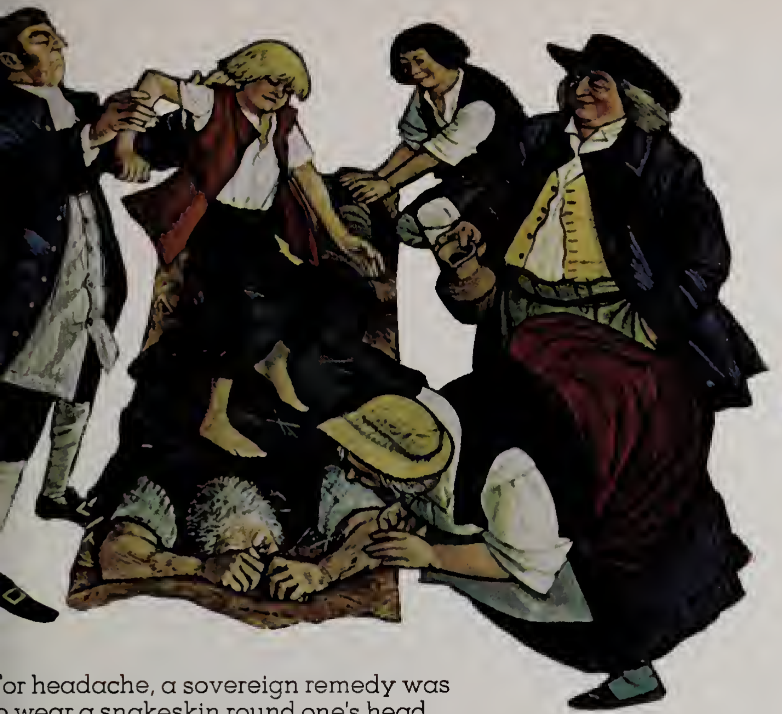
One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

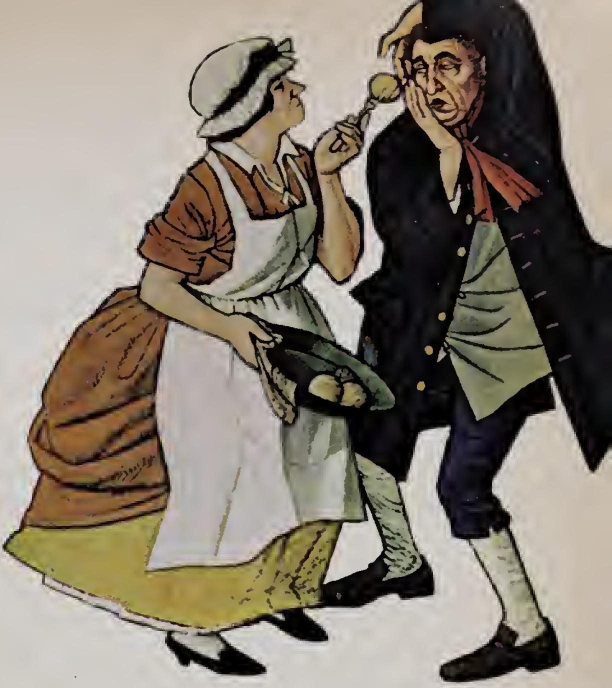
**Prescribing Information — Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**

**Quinamm**™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)

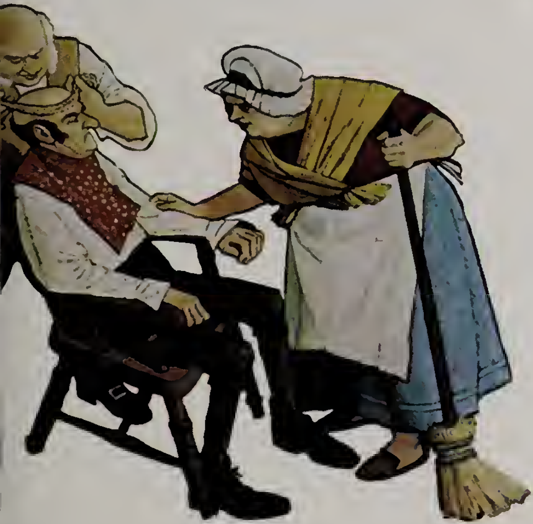
once-popular treatment for back pains
vas to have the seventh son of a seventh son
tand or walk on the patient's back.





The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

'or headache, a sovereign remedy was
wear a snakeskin round one's head.



# A realistic approach to pain relief

# Empirin'®

## ompound with Codeine
## hosphate gr. 1/2 No. 3

ach tablet contains:
odeine Phosphate gr. 1/2 (Warning—
lay be habit forming), Phenacetin gr. 2 1/2,
spirin gr. 3 1/2, Caffeine gr. 1/2.

**eeps the promise
f pain relief**

.W. & Co.' narcotic products are
lass "B", and as such are available on oral
rescription, where State law permits.

**BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.**

# Now that there's a greater therapeutic potential for treating Parkinson's disease and syndrome

*...the information on these pages will be of practical interest to you*

### Larodopa® (levodopa) Roche : therapy that demands slow, individualized dosage titration

With the advent of new Larodopa (levodopa), there is now an agent that holds promise of relief of all the major symptoms of Parkinson's disease and syndrome—rigidity and akinesia as well as tremor.

However, as has been reported in the medical literature, levodopa demands slow, careful titration of dosage, and frequent patient monitoring. Adverse reactions may occur at any time, some serious enough to require dosage reduction or discontinuance of therapy. Thus, before prescribing, it is particularly important to refer to the following Important Therapeutic Considerations, the sections covering dosage and administration, and to the information on monitoring the patient (see prescribing information).

### Important Therapeutic Considerations

Larodopa (levodopa) is an unusual drug which must be administered with particular care. In view of its high incidence of adverse reactions, you will find the following therapeutic considerations for Larodopa important:

(a) Larodopa is not curative and its mechanism of action is unknown, though postulated.

(b) Long-term safety and efficacy for Larodopa have not been established.

(c) Accurate diagnosis is imperative since there is no evidence that Larodopa is effective in neurological diseases other than Parkinson's disease and syndrome.

(d) About one-third of patients or more will not experience clinical improvement on Larodopa, and virtually 100% of patients will experience side effects of some degree.

(e) The dose of Larodopa producing maximal improvement with tolerated side effects must be *carefully titrated for the individual patient.*

(f) Finally, there is no evidence that early treatment with Larodopa, while possibly controlling symptomatology, alters the course of the disease.

*Photographs of patients treated with Larodopa by permission of the patients.*

### Guide to dosage and administration of Larodopa® (levodopa) Roche

*Usual daily dosage*—initially, 0.5 to 1 Gm daily (divided in 2 or more doses with food).

*Total daily dosage*—increased gradually in increments of 0.125 to 0.75 Gm every 2 or 3 days, as tolerated.

*Usual daily dose range*—from 4 to 6 Gm given orally in 3 or more divided doses, with food.

*Daily dosage should NOT exceed 8 Gm.*

*Optimal therapeutic dosage*—usually reached in 6 to 8 weeks.

*Establishing optimal dosage*—must be determined and *carefully titrated for the individual*—gradually increase dosage until: (1) maximal response is seen, or (2) maximum recommended dosage is reached, or (3) side effects preclude further dosage increase, or require reduction or discontinuation of dosage.

*Interrupted therapy*—after brief interruption, dosage should again be adjusted gradually. (In many cases, the patient can be rapidly titrated to his previous therapeutic dosage. See "Precautions" section of Complete Prescribing Information.)

*To underscore the extreme importance of careful dosage titration,* the following week-by-week dosage pattern has been prepared, based on the assumption that the course of therapy is uninterrupted by any complications requiring a change in dosage. (Again, dosage must be reduced when intolerable side effects occur.)

Because it is absolutely imperative that Larodopa therapy be individualized to meet the particular needs of each patient, the following dosage schedule should be considered only a model.

# Larodopa®
## levodopa/Roche

### itration of Larodopa (levodopa) dosage patient evaluated weekly

| tervals | 0.25 Gm Tablets | 0.5 Gm Tablets | Total Daily Dose |
|---|---|---|---|
| eek 1 | ½ tab (0.125 Gm) *q.i.d.* w/ food | | 0.5 Gm |
| eek 2 | 1 tab (0.25 Gm) *q.i.d.* w/ food | | 1.0 Gm |
| eek 3 | 1½ tab (0.375 Gm) *q.i.d.* w/ food | | 1.5 Gm |
| eek 4 | | 1 tab (0.5 Gm) *q.i.d.* w/ food | 2.0 Gm |
| eek 5 | | 1½ tab (0.750 Gm) at breakfast and dinner.<br>1 tab (0.5 Gm) at lunch and bedtime | 2.5 Gm |
| eek 6 | | 1½ tab (0.750 Gm) *q.i.d.* w/ food | 3.0 Gm |
| eek 7 | | 2 tab (1.0 Gm) at breakfast and dinner.<br>1½ tab (0.750 Gm) at lunch and bedtime | 3.5 Gm |
| eek 8 | | 2 tab (1.0 Gm) *q.i.d.* w/ food | 4.0 Gm |

ne daily maintenance dosage in the above example may increased, decreased, or maintained at the 4 Gm level pending upon the point at which optimal therapeutic sults are achieved.

*oncurrent therapies:* Larodopa (levodopa) may be used ncomitantly with other antiparkinsonism drugs such as nztropine mesylate (Cogentin), trihexyphenidyl HCl rtane) or procyclidine HCl (Kemadrin), but when more an one drug is used, the usual dose of each may have to reduced.

*ot to be given concomitantly:* MAO inhibitors. Such ents must be discontinued two weeks prior to initiating arodopa therapy.

ote of caution for patients who require vitamin pplementation: It has been reported that pyridoxine HCl itamin $B_6$) can rapidly reverse the antiparkinson effects levodopa therapy.

### timetable for monitoring

hile it cannot be emphasized too strongly that each tient on Larodopa must be treated as a totally *distinct* tity, the following are suggested as guidelines in the onitoring of such patients.

*For the first month, at least:* the average ambulatory tpatient should be seen and evaluated a minimum of *once week.*

*During the second month:* patient evaluations can be tended to *every two weeks* (assuming no laboratory normalities or intolerable side effects have occurred).

3. *From the third through the sixth month:* the patient should be evaluated *once a month.*
4. *After six months on the appropriate maintenance dose:* with no significant adverse reactions or laboratory abnormalities, the patient should be seen at least *once every two months.*
5. *Finally, after one year on maintenance dosage:* evaluation should be made no less than *once every three months.*

### Therapeutic response

A favorable response may often be seen within 10 days to several weeks. However, a patient should not be taken off a tolerable dose—even in the absence of a response—until six months have elapsed. This is because, in some instances, the response may come relatively late. Of course, any serious laboratory abnormalities or intolerable side effects automatically dictate discontinuance of therapy.

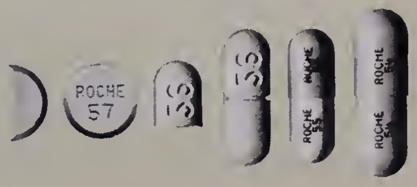
### Lessening the side-effects problem

While it is generally advisable that levodopa be taken after meals, nausea and vomiting, two frequently occurring side effects of levodopa, can often be minimized by taking medication with foods. If nausea becomes intolerable, the dosage should be cut back in daily decrements equal to the most recent increments given the patient. This reduction is to be spaced over two- or three-day intervals. Conversely, as nausea subsides, the drug dosage should be slowly increased in like increments.

An important part of the routine monitoring procedure would be to determine any possible cardiovascular problems. If cardiac arrhythmias occur, Larodopa should be discontinued and other antiparkinson therapy instituted. With orthostatic hypotension a possibility, checking the patient's blood pressure (both supine and standing) is essential.

If choreiform movements appear, they usually occur when maximum therapeutic dosages are reached. To control such effects, reduce dosage by decrements of 0.5 Gm daily.

### Flexible dosage: scored tablets of 0.25 Gm and 0.5 Gm help simplify dosage titration



Conveniently scored 0.25 and 0.5 Gm tablets make possible more precise titration. Should another dosage form be preferred, Larodopa is also supplied in capsule strengths of 0.25 and 0.5 Gm.

**Before prescribing, please consult product information on next page. ⟶**

*For the relief of symptoms associated with Parkinson's disease and syndrome*

# Larodopa®
## levodopa/Roche

**Before prescribing, please consult complete product information, a summary of which follows:**

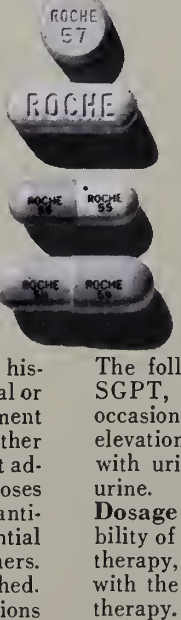
> BECAUSE OF THE HIGH INCIDENCE OF ADVERSE REACTIONS AND THE NECESSITY FOR INDIVIDUALIZING THERAPY, THE PHYSICIAN SHOULD THOROUGHLY FAMILIARIZE HIMSELF WITH THE INFORMATION IN THE PACKAGE INSERT BEFORE INSTITUTING THERAPY WITH LARODOPA (LEVODOPA). ACCURATE DIAGNOSIS IS IMPERATIVE BECAUSE EVIDENCE IS LACKING THAT LARODOPA IS EFFECTIVE IN NEUROLOGICAL DISEASES OTHER THAN PARKINSON'S DISEASE AND SYNDROME.
>
> ADEQUATE CLINICAL AND LABORATORY FACILITIES SHOULD BE AVAILABLE FOR PROPER MONITORING OF TREATMENT.
>
> THE LONG-TERM SAFETY AND EFFICACY OF LARODOPA HAVE NOT BEEN ESTABLISHED.

**Indications:** For the treatment of Parkinson's disease and syndrome. Useful in relieving many of the symptoms, particularly rigidity and bradykinesia; frequently helpful in management of associated tremor, dysphagia, sialorrhea and postural instability.

**Contraindications:** In patients for whom a sympathomimetic amine is contraindicated; in patients receiving MAO inhibitors (the latter should be discontinued two weeks prior to initiating therapy with Larodopa); in patients with clinical or laboratory evidence of uncompensated endocrine, renal, hepatic, cardiovascular or pulmonary disease; with narrow angle glaucoma and blood dyscrasias; in patients with known hypersensitivity to levodopa.

**Warnings:** Long-term safety and efficacy not established. Administer with extreme caution to patients with bronchial asthma or emphysema who may require sympathomimetic drugs; to those with active peptic ulcer (in facilities equipped to treat gastrointestinal hemorrhage); in patients with psychoses or severe psychoneuroses. Initiate therapy with extreme caution and in proper treatment facility in patients with a history of myocardial infarction who have residual atrial, nodal or ventricular arrhythmias. Monitor all patients for development of mental changes, depression with suicidal tendencies, other serious antisocial behavior. Carefully consider concomitant administration of pyridoxine hydrochloride (vitamin $B_6$); oral doses of 10 to 25 mg have been reported to rapidly reverse the antiparkinson effects of Larodopa. In pregnancy, weigh potential benefits against possible hazards. Do not use in nursing mothers. Safety of Larodopa in children under age 12 not established.

**Precautions:** During extended therapy, periodic evaluations of hepatic, hematopoietic, cardiovascular and renal function recommended. In diabetic patients, control may be adversely affected; careful, frequent monitoring and proper adjustment of antidiabetic regimen required. Patients with chronic wide angle glaucoma may be treated cautiously provided intraocular pressure is well controlled and patient is monitored carefully. Monitor carefully patients receiving antihypertensive agents or psychoactive drugs concomitantly, or those with history of convulsions. If general anesthesia is required, discontinue Larodopa 24 hours prior to surgery; monitor cardiorespiratory functions carefully. Patients who improve on Larodopa therapy should resume normal activities cautiously. May be used concomitantly with other antiparkinson drugs with possible reduction in dosage of each.



**Adverse Reactions:** *Most frequently occurring:* nausea, anorexia, emesis, cardiac irregularities, orthostatic hypotension; choreiform, dystonic and other adventitious movements; dizziness, sedation, dyskinesia; psychiatric symptoms such as agitation, anxiety, confusion, depression, hallucinations, delusions, insomnia, nightmares, and mental changes including paranoid ideation and psychotic episodes. *Less frequently occurring* and listed according to system: *psychiatric*—suicidal tendencies, increased libido with serious antisocial behavior, euphoria, lethargy, stimulation, fatigue and malaise, dementia; *neurological*—ataxia, convulsions, faintness, impairment of gait, headache, increased hand tremor, akinetic episodes, torticollis, trismus, oculogyric crisis, weakness, numbness, bruxism; *gastrointestinal*—constipation, diarrhea, epigastric and abdominal distress and pain, flatulence, eructation, hiccups, sialorrhea, difficulty in swallowing, bitter taste, dry mouth, tightness of mouth, lips or tongue, duodenal ulcer, gastrointestinal bleeding, burning sensation of the tongue; *cardiovascular*—nonspecific ECG changes, palpitations, hypertension, flushing, phlebitis; *hematological*—hemolytic anemia (1 case); *dermatological*—sweating, edema, hair loss, pallor, rash, bad odor; *musculoskeletal*—low back pain, muscle spasm and twitching, blepharospasm, musculoskeletal pain; *respiratory*—feeling of pressure in the chest, cough, hoarseness, bizarre breathing pattern, postnasal drip; *urogenital*—urinary frequency, retention, incontinence, hematuria, nocturia, and one report of interstitial nephritis; *special senses*—blurred vision, diplopia, dilated pupils, activation of latent Horner's syndrome; *other*—fever, hot flashes, weight gain or weight loss.

Nausea, anorexia and vomiting usually obviated by temporary dosage reduction and/or administration with food. If cardiac arrhythmias occur, discontinue and institute other antiparkinson therapy. Reduce dosage when involuntary movements occur.

The following have been noted: elevation of BUN, SGOT, SGPT, LDH, bilirubin, alkaline phosphatase or PBI; occasionally, reductions in WBC, hemoglobin and hematocrit; elevations of uric acid with use of colorimetric method but not with uricase; rarely, positive Coombs test; dark sweat and urine.

**Dosage and Administration:** Because of the strong possibility of adverse reactions and the necessity for individualizing therapy, the physician should thoroughly familiarize himself with the information in the package insert before instituting therapy.

**How Supplied:** *Tablets*, pink, scored, containing 0.25 Gm levodopa (imprinted Roche 57) or 0.5 Gm levodopa (imprinted Roche 56)—bottles of 100 and 500.

*Capsules*, containing 0.25 Gm levodopa (pink and beige, imprinted Roche 55) or 0.5 Gm levodopa (pink, imprinted Roche 54)—bottles of 100 and 500.

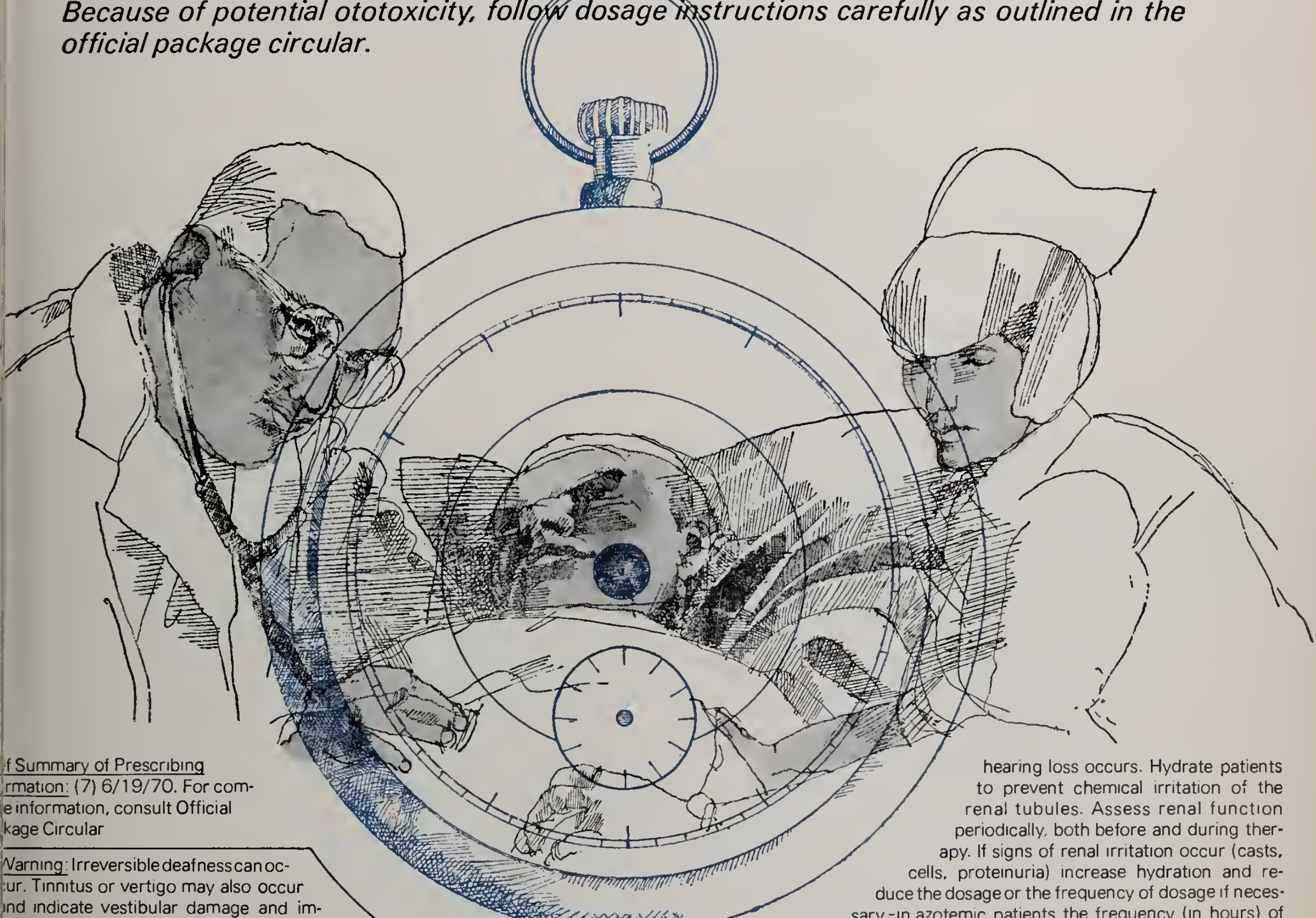
**Roche Laboratories**
**Division of Hoffmann-La Roche Inc.**
**Nutley, N.J. 07110**

# A valuable hospital antibiotic —when there is no time

**in severe systemic infections**—postoperative bacteremia, Gram-negative/staph pneumonias or neonatal sepsis—Kantrex® (kanamycin sulfate) is often indicated before results of customary sensitivity tests can be reported. Clinical response is often seen within 24-48 hours in susceptible infections, with remission soon after.

**10 years of experience** confirm the continuing effectiveness of Kantrex® against many Gram-negative bacilli (most Pseudomonas are resistant) and staph.

*Because of potential ototoxicity, follow dosage instructions carefully as outlined in the official package circular.*



f Summary of Prescribing
rmation: (7) 6/19/70. For com-
e information, consult Official
kage Circular

Varning: Irreversible deafness can oc-
ur. Tinnitus or vertigo may also occur
nd indicate vestibular damage and im-
ending deafness. The risk is sharply increased
vith renal dysfunction. In such cases, decrease size
nd frequency of doses. Discontinue kanamycin and
heck hearing if azotemia increases. Watch carefully for oto-
oxicity in older patients and patients receiving more than 15 Gm. of kana-
nycin. To avoid neuromuscular paralysis with respiratory depression, post-
one intraperitoneal instillation in post-operative patients until recovery
rom anesthesia and muscle relaxants is complete. Avoid concurrent use of
ther ototoxic drugs including ethacrynic acid. Safety in pregnancy is not
stablished.

cations: Serious infections due to susceptible strains of *E. coli,* Proteus sp.,
*erogenes, K. pneumoniae, Serratia marcescens* and *Mima-Herellea.* Culture
sensitivity studies should be performed.

traindications: A history of hypersensitivity to the drug. Prior auditory damage
anamycin or other agents may be a contraindication if effective alternative
apy is available.

cautions: Obtain audiograms before and during therapy in patients with renal
unction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary–in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

Supplied: Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. and 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml.

A.H.F.S. Category 8:12.28

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company, Syracuse, New York 13201

# KANTREX® INJECTION
## (kanamycin sulfate)

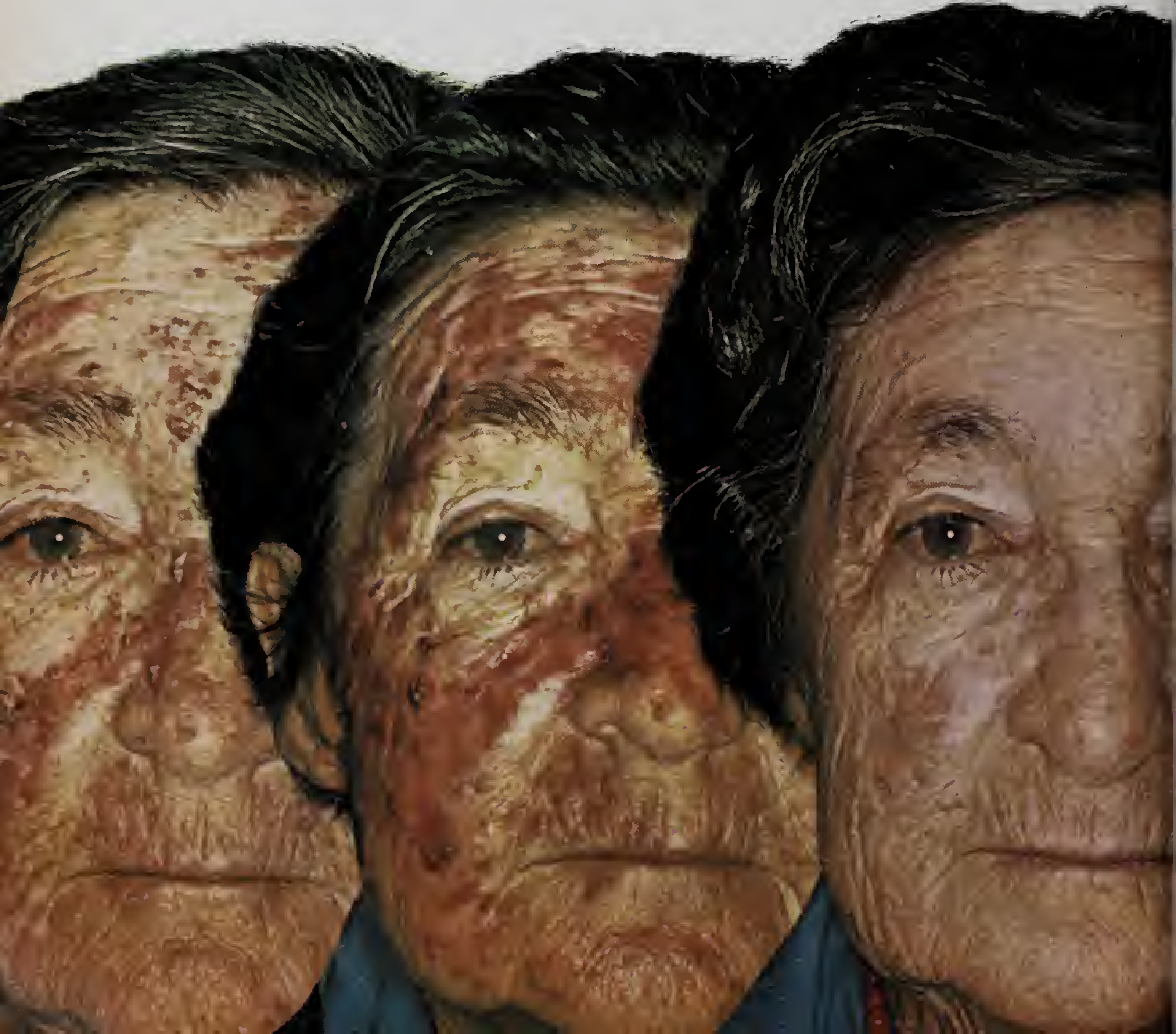
Efudex®
(fluorouracil)
cream/solution

In the treatment of solar/actinic keratoses -
An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completel
Residual mild erythema remains in som
areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.



ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

# An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a opical alternative to cryosurgery, electrodesiccation nd cold-knife surgery in the treatment of solar/actinic eratoses. It is effective, comparatively inexpensive and specially well suited for treatment of these multiple esions. Important, too, is the highly desirable cosmetic esult. Clinical experience demonstrates that treatment vith Efudex results in an extremely low incidence of carring.*

# Highly effective

In clinical trials, depending on the dosage form nd strength used, complete involution occurred in 7 to 88 per cent of lesions following treatment. The ate of recurrence was low, ranging from 1.7 to 5.6 per ent up to a year after completion of therapy. When ew lesions appeared, repeated courses of Efudex herapy proved effective.*

# Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteris-ic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

# Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

25 Gm
EFUDEX®
TOPICAL
CREAM 5%
preparation of fluorouracil ROCHE
Item 72630
NDC-4 1506 03

new
Efudex®
(fluorouracil)
cream/solution

---

*Data on file, Hoffmann - La Roche Inc., Nutley, New Jersey.

**ONLY ONE FIRM CAN PROVIDE ALL THESE SERVICES, OR ANY ONE OF THEM . . .**

- A complete low-cost patient billing service
- Confidential information on every account
- An ethical and effective collection service
- A dignified pre-collection service
- Professional accounts receivable consultation

**THE CREDIT BUREAU, INC.**

FOUR OFFICES TO SERVE YOU LOCALLY

WASHINGTON, D.C.; ROCKVILLE, MD.; FAIRFAX, VA.; ALEXANDRIA, VA.

3,000 CLOSELY ASSOCIATED AGENCIES THROUGHOUT THE COUNTRY

**Call Now to Arrange an Appointment with Our Representative**

ED GARRETSON NAtional 8-0680

*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

***PROFESSIONAL LIABILITY**

**OFFICE PUBLIC LIABILITY**

**LOW COST TERM LIFE INSURANCE**

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

* endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

# History of the Medical Society of the District of Columbia

## CHAPTER VII

### Doctors in Court

SECRECY WHICH SURROUNDED the organization of Group Health Association, Inc. stirred many members of the Medical Society of the District of Columbia to a high degree of emotion. Early in 1937 a prospectus was circulated marked "Confidential: For Private Circulation Only. A plan for the coöperative medical service on a periodic payment basis for Federal employees and their families." On February 24, 1937 GHA filed its Certificate of Incorporation.

As stated in the previous chapter, it was soon learned that the Home Owners Loan Corporation, a Government agency, had advanced $40,000 toward the establishment of GHA, a private corporation. Further, two of the five members of GHA's Executive Committee were to be nominated by the Home Owners Loan Corporation.

Efforts by the Society's Committee on Medical Economics and the AMA's Bureau of Legal Medicine and Legislation to obtain details of the contemplated operation of GHA met with refusal.

In the meantime stormy meetings were being held in the Medical Society's building. The Society decided that everything possible should be done to prevent GHA's operation. Some members warned of the dangers of this course, but those whose views carried the greatest weight had the support needed.

One weapon was amending the Society's By-laws in such a manner as to exclude GHA physicians from membership. Another was to keep them out of the District Hospitals. To bring this about a "white list" of hospitals was adopted. Another amendment prohibited consultation with GHA physicians. Amendments became so numerous that finally the By-laws did not make much sense.

In desperation the Society sent two of its members, Dr. R. Arthur Hooe and Dr. F. X. McGovern to Chicago to meet with Dr. Olin West, Secretary and General Manager of the AMA, Dr. W. C. Woodward, Director of the AMA's Bureau of Legal Medicine and Legislation; and Dr. R. G. Leland, Director of the Association's Bureau of Medical Economics. For some unexplainable reason Dr. West had the conference recorded. Dr. Hooe and Dr. McGovern were assured that the AMA was sympathetic and would do what it could to be of assistance. Their attention was called to the AMA's "Manifesto" in opposition to GHA. The transcript of the conference was later used as evidence in court.

Late in November the Society's membership, many of whom had enjoyed the often boisterous debate on GHA at Medical Society meetings, became concerned about the outcome. There was a demand among younger members that a full-time executive be employed.

On June 1, 1938 Mr. Theodore Wiprud's first day as Executive Director and Secretary of the Medical Society, the Washington *Evening Star* announced that the Department of Justice had launched an inquiry into complaints that the AMA and the Medical Society had violated the Sherman Antitrust Act in their controversy with GHA. Shortly afterward another release stated that a special grand jury would be empaneled to determine whether there had been any violation of the Act.

Legal counsel then employed by the Medical Society, had months previously advised officials of the Medical Society that they had nothing to fear legally in opposing GHA. This gave them a feeling of security which, in time, proved unjustified.

On August 12, 1938, three prominent physicians in Washington, Drs. Sterling Ruffin, Prentiss Willson and Elijah W. Titus, individually filed a bill of complaint against GHA to show cause why it should not be enjoined from practicing medicine in Washington.

It was only a few weeks after Mr. Wiprud had taken up his new duties that agents of the Department of Justice paid him a visit. They wished to see the Medical Society's records. With the legal counsel's approval, minutes of the meetings of the Society, its Executive Committee and other committees were turned over to the Department of Justice. They spent the better part of August examining documents in the Medical Society's library. At the conclusion of their study the records were removed from the Society's building for photostating.

The special grand jury convened, October 17, 1938. Among the first witnesses were long-time critics of the AMA–Dr. Hugh Cabot and Mr. Michael Davis. Appearing for the AMA was Dr. W. W. Bauer. Mr. Wiprud was subpoenaed to be questioned and to identify Society records.

On December 20, 1938 the special grand jury returned an indictment against the following: the American Medical Association, the Medical Society of the District of Columbia, the Harris County (Texas) Medical Society, the Washington Academy of Surgery, and Drs. Arthur C. Christie, Coursen B. Conklin, James B. G. Custis, Thomas A. Groover, R. Arthur Hooe, Thomas E. Mattingly, Leon A Martel, F. X. McGovern, Thomas E. Neill, E. Hiram Reede, William M. Sprigg, William J. Stanton, John O. Warfield, Jr., Prentiss Willson, Wallace M. Yater and J. Rogers Young. All of these individuals were members of the Medical Society of the District of Columbia. Other individuals indicated were officials of the AMA: Wm. D. Cutter, Morris Fishbein, Rosco G. Leland, Olin West, and William C. Woodward. The indictment was signed by Thurman W. Arnold, Assistant Attorney General of the United States, David A. Pine, U. S. Attorney for the District of Columbia, and other Justice Department attorneys.

Criminal proceedings were thereupon instituted, causing much resentment among the medical profession throughout the country and more than a little alarm among the defendents. Like most physicians, they feared appearing at a disadvantage in court proceedings.

The defendants won the first round in the District Court when Justice James M Proctor dismissed the indictment stating that in his opinion medicine was not a "trade" under the Sherman Act. He also held it insufficient "as a pleading," "afflicted with vague and uncertain statements" and in some instances "altogether lacking" in "material facts". "Influence, opinion and conjecture were freely indulged in", said the Court, "which smacks as much of highly colored argument as true discourse."

Naturally, the medical profession was elated. The Assistant Attorney General promptly announced that an appeal would be made. He thereupon petitioned the Supreme Court of the United States to assume jurisdiction without the case having been heard by the Court of Appeals. On October 23, 1939 the Supreme Court denied the Assistant Attorney General's petition.

*The Washington Post* for October 24, 1939 editorialized in part as follows: "There have been indications that the Antitrust Division has been unduly excited over the idea of prosecuting the medical association for the alleged restraint of trade."

The Court of Appeals failed to uphold Judge Proctor and on March 4, 1940 stated, "We have no doubt that the reading of the indictment as a whole states a case under Section 3 of the Sherman Act." It was now the defendants' turn to petition the Supreme Court for review. This was done.

The petition to the Supreme Court by the defendants that it review the decision of the Court of Appeals was refused. On June 3, 1940 the case was remanded for further proceedings. The result was that a jury trial was held to hear the evidence and to decide the issues involved.

Dr. Daniel L. Borden became President of the Medical Society of the District of Columbia on July 1, 1940. He wrote in his first "President's Page" in the *Medical Annals of the District of Columbia* as follows: "It is with mixed emotion that we see the tragic picture of a group of men whose honesty and integrity have never been questioned but who finally see themselves precipitated into the middle of a criminal prosecution."

Early in 1941 the individual defendants appeared before Justice Proctor in the courtroom of Criminal Division Number 2 of the District Court of the United States to plead to the indictment. They stood in a semicircle before the Justice. Each pleaded "not guilty." Dr. Borden and Mr. Wiprud, not defendants, were present and were much depressed by the scene. Others on hand appeared to be those awaiting trial for a variety of crimes.

The trial before Justice Proctor got under way on February 4, 1941 before a jury and a packed courtroom. It lasted eight grueling weeks.

Attorneys for the Department of Justice were John H. Lewin, Special Assistant to the Attorney General, and Department of Justice Attorneys Grant W. Kelleher, George B. Haddock, Edward J. Hickey, Jr., Walton Allen and Compton Timberlake.

Attorneys for the American Medical Association and the Medical Society were Edward M. Burke of Chicago, Seth W. Richardson, Adrien Busick, Charles S. Baker, William E. Leahy and Warren E. Magee.

Before the trial the AMA had been informed that the Medical Society could not carry the burden of legal counsel financially. Thereupon the AMA agreed to underwrite the cost of counsel.

Dr. Borden and Mr. Wiprud sat with the defendants facing the jury throughout the eight weeks. Naturally their work suffered as did that of the defendants. In addition, they were under a constant strain of not knowing what the final outcome would be. As the weeks wore on some of the defendants showed the strain by their pallor and tense faces.

It was soon apparent that the detailed minutes of the Medical Society were damaging to the defendants. They contained statements and actions that made them squirm. The records of the AMA which had been subpoenaed contained material that never should have been in them.

Mr. Lewin, Chief Prosecutor, was young, able, and merciless in examining witnesses. Sometimes he tried Justice Proctor's patience and was censured. It was pathetic to see how some of the witnesses withered under his scorching accusations. Lewin was assisted in the prosecution by Mr. Kelleher.

The trial had a few light moments. One day Mr. Kelleher was describing alleged collusion between the Medical Society of the District of Columbia and the Harris County (Texas) Medical Society. His description rivaled a cloak-and-dagger story and had no foundation whatsoever. There was a ripple of laughter from the defendants and Justice Proctor rebuked them severely. On another occasion Mr. Lewin became expansive and reminded Justice Proctor that he represented the Department of Justice. Justice Proctor gave him a dressing down before the jury.

Mr. Leahy, a stocky, florid-faced man, was the chief pleader for the defendants. A lawyer of the old school, he had achieved prominence in criminal cases. He was a master of florid oratory of somewhat dudious content. Yet on occasion, during the trial, he acquitted himself remarkably well. His principal shortcoming was that he had no capacity for or will to study. He relied upon his intelligence and oratorical ability.

Each evening, therefore, Mr. Burke, Mr. Baker, and Mr. Magee, an able, young Washington lawyer, would brief Mr. Leahy on legal points for the next day. Mr. Richardson's appearance was limited to the less spectaculor aspects of the case. He was a colorless and serious man.

The defendants concerned had their good and bad days. They looked at the jurors for hours at a time speculating on what they were thinking. Much of the material presented to the jurors was of a technical nature and undoubtedly over their heads. But regardless of this they would decide the defendants' fate.

When both sides had finished, Justice Proctor charged the jury. A pertinent paragraph was the following:

"I charge you that the defendants have the lawful right, through action taken in their meetings and conferences, to formulate and adopt rules of medical ethics for the control and government of themselves and the members of their societies and the practice of their profession, and the support and maintenance of such principles of medical ethics by legitimate persuasion and reasoned argument or by enforcement of society rules, laws and regulation, without more, would not constitute an unreasonable restraint against Group Health Association, its doctors or members."

There was, of course, much more to the charge, but it can be said that the defendants were pleased with it.

By direction of the Court, the Harris County (Texas) Medical Society, the Washington Academy of Surgery, Drs. J. Rogers Young and Leon A. Martel were acquitted.

The trial came to a dramatic close at midnight of April 4, 1941. Early in the evening the defendants were told that the jury was being locked up for the night. Just as the last defense attorney was leaving, the bailiff informed him that the jury had agreed upon a verdict. Then followed a scramble to have all defendants present. Justice Proctor was at home and arrived at midnight. The defendants were in their places, and the courtroom was well filled with wives of the accused, newspaper reporters, and others.

The jury entered, and when it was in place the foreman arose. He was asked, "How do you find the American Medical Association?" "Guilty." The same question was asked in regard to the Medical Society of the District of Columbia. "Guilty." The individual defendants stiffened, and there was a hint of suppressed hysteria among the spectators. Then the foreman was questioned in regard to the individual defendants. "What say you, as to Dr. Morris Fishbein?" "Not guilty." The same answer was given as to all of the other individual defendants.

Counsel for both sides were astounded. How could the defendants, among them high officials in the organizations found quilty, be not guilty? The verdict was variously described as "anomalous", "arbitrary", and "immaculate conception".

Following the verdict the American Medical Association was fined $2,500 and the Medical Society of the District of Columbia, $1,500. However, counsel for the defense promptly filed three motions: (1) to set aside the jury's verdict as it relates to the corporate defendants, (2) in arrest of the judgment, and (3) for a new trial.

Justice Proctor denied the corporate defendants' motions and stated: "All pending motions and various forms looking to granting a new trial are severally denied. The clerk will enter the proper order."

The trial had taken its toll of some individual defendants. In fact, several of them never fully recovered from this experience.

On June 15, 1942 the Court of Appeals affirmed the conviction of the AMA and the Medical Society. A petition was made to the Supreme Court that it review the case. The request was granted, but the Supreme Court upheld the lower courts.

After four and one-half years of legal proceedings the case came to a close. Some editorial comments in the city newspapers at the time are of more than passing interest.

*The Evening Star* (Washington):

"The case was precedent-making in Sherman Act prosecutions, and the principal challenge of the defense rested on the contention that the practice of medicine is a profession, not a trade, and that physicians consequently were exempt from prosecution under the Act. Justice Roberts, who wrote the Court's opinion, said it was not necessary to pass on this particular point."

*The Washington Post:*

"The only question the opinion leaves unanswered is this: When an association of doctors is restrained from interfering with the operations of a business which it believes to be encroaching upon the ethics of the medical profession, why should racketeers who stop the actual flow of trade from one state to another in the name of organized labor be deemed immune to punishment in the Federal courts. It is the contrast between the attitude of the Court in dealing with different associations that is shocking. We hope the day will not be long in coming when stern justice that has been administered to the Medical Association will be meted out to every group that restrains or conspires to restrain the flow of commerce."

For years, whenever the Medical Society was mentioned in the press it was followed by the statement that the organization had been a defendant in an antitrust case. It seemed as if the label would stick indefinitely, but in time it was no longer of interest.

At its meeting in June, 1949 the AMA House of Delegates "recommended that the tentative principles set up to guarantee good medical service to subscribers to lay-sponsored health plans (20 principles) be forwarded to state and county medical societies as a guide in determining the eligibility of such plans for approval by the proper accrediting body of the AMA, and shall come bearing the endorsement of the state or county medical societies involved."

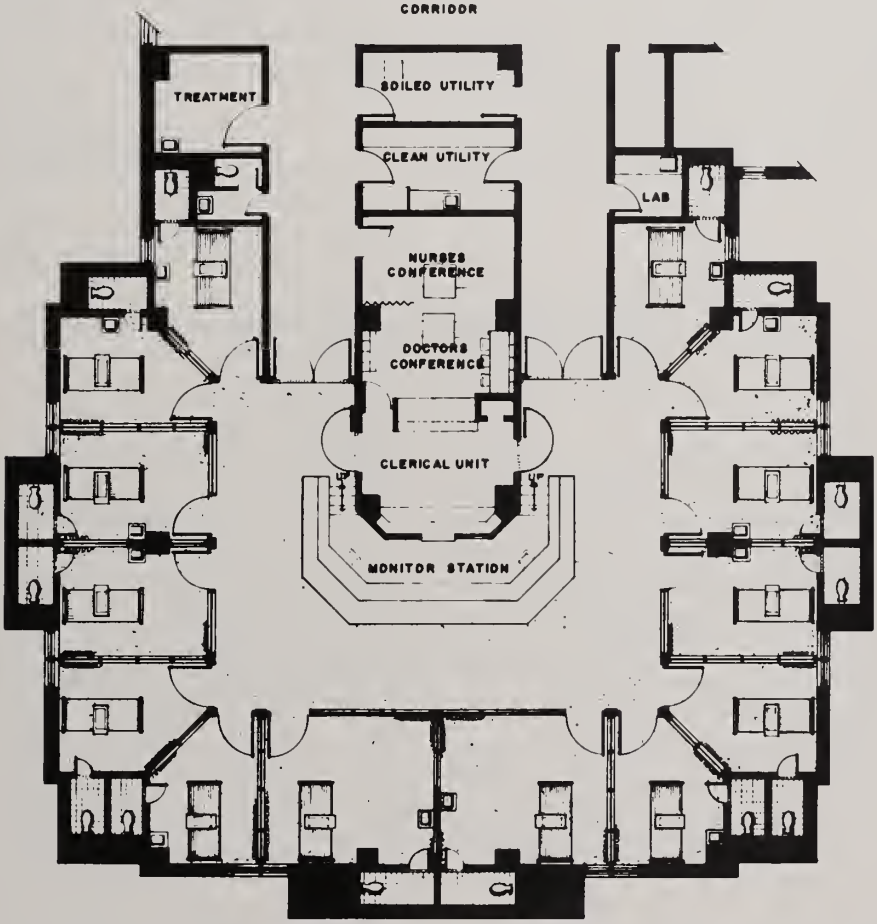
As a member of the Coöperative Health Federation of America, GHA representatives met in conferences with the AMA's Council on Medical Service and Public Relations. GHA saw this as a step toward the settlement of differences. Mr. William E. Warne, President of GHA, expressed confidence that "relations between GHA and the Medical Society of the District of Columbia may be further strengthened." He suggested that the 20 principles adopted by the AMA House of Delegates might serve as a favorable evaluation of GHA.

On May 3, 1950 the Executive Board reported to the Medical Society that its Committee on Medical Care had reported that GHA had conformed to the 20 principles. The Board recommended Society approval of GHA, which was granted.

By this time many of the individual defendants in the antitrust trial had died. In 1962 only three of the 19 had survived.

# Editorials

## Intensive Care Unit



**Plan of typical intensive care unit in new ICU wing scheduled for completion at Washington Hospital Center in Fall 1972.**

One of the exciting chapters in the history of medicine concerns itself with the intensive care unit. As advances in monitoring and bio-engineering have been developed, the idea of intensive care units has spread so diffusely that few hospitals do not have at least a coronary care unit.

With its beginning in this branch of the treatment of patients with myocardial or suspected myocardial infarction, the mechanism for close scrutiny of patients has spread to other branches of medicine. The concept of the intensive care unit permits the concentration in one area of necessary equipment, nurses, and specially trained technicians and physicians required to provide the utmost in medical care for patients with similar critical illnesses. Coronary care units, because they were first developed and probably required the greatest monitoring, are thus replete with constant electrocardiography monitoring, memory banks of computers, closed-circuit television, amplifiers for scrutinizing vital signs, and central consoles which are constantly under observation. The intensive care concept has been adapted to other aspects of acute care such as psychiatry, seriously ill medical patients, surgery, burn, shock and trauma, renal and respiratory failure.

We at the Washington Hospital Center take great pride in the construction of what will be the largest intensive care wing in the world. It will encompass all of the above noted special areas with the latest monitoring equipment available. It will have in addition, diagnostic units for X-ray and pulmonary function studies available in the same wing so that obtaining these parameters will be simplified.

Connecting corridors to the main hospital will permit horizontal flow from general-care beds to the intensive-care units which reinforce them.

The typical intensive care floor will feature a central raised observation platform in each unit with back-to-back supporting services connecting the twin towers. Peripheral patient rooms on three sides of each observation platform will be visible for constant monitoring by specially trained personnel.

Intensive care needs for the 845-bed Washington Hospital Center have been estimated to eight to ten per cent of bed complement by consultants who recommended the construction in 1968. Groundbreaking took place in September, 1970, and the wing will be completed in the fall of 1972.

Although it will be the world's largest intensive care complex, perhaps the most exciting aspect is that we will have concentrated in an intensive care wing the skilled care and sophisticated equipment necessary to provide care for the acutely ill patient in all specialties.

JACK J. RHEINGOLD, M. D.
*President, Medical Staff*
*Washington Hospital Center*

## The Misuse of Cerebrospinal Fluid Shunts
## A Brief Contemporary Comment

With the publication over 30 years ago of "A New Palliative Operation in Cases of Inoperable Occlusion of the Sylvian Aqueduct" Arne Torkildsen[1] inaugurated the current era of cerebrospinal fluid shunt procedures employing implanted "hardware." Time and experience have wrought considerable improvement in the quality and sophistication of the materials utilized. The concept of fluid diversion has been extended to include extracranial outlets, particularly the cardiac atrium and the peritoneal cavity. These operations are usually accomplished with a minimum stress to patient and surgeon alike. Torkildsen's concept embodied a palliative procedure to relieve obstruction caused by an incurable lesion in an inaccessible location.

The intent of this communication is to draw attention to the dangers inherent in indiscriminate use of cerebrospinal fluid shunts. The literature of the past 2 decades is replete with evidence of grievous errors which have occurred when shunts have been inserted in situations that demanded a direct attack on the lesion. In some instances tumors have been overlooked because of inadequate demonstration of the ventricular system with negative or positive contrast media. A case in point is that cited by Sjögren et al[2] in which a child with an enlarging head, despite a functioning shunt, was found at autopsy to have a choroid plexus papilloma of the lateral ventricle. It is equally apparent that patients with benign tumors of the third ventricle such as colloid cysts (Kahn,[3] Kelly,[4] McKissock[5]) and meningiomas (Sachs et al[6]) have fared poorly after shunts alone. The immediate short-term and often dramatic amelioration of the pressure symptoms after a shunt engenders a sense of security that is not justified because the primary process continues unchecked in its growth. This is particularly true in cases of posterior fossa masses. I know personally of postmortem disclosures of meningioma, choroid plexus papilloma, and astrocytoma that have been made in patients who did not have proper surgical exploration but were treated by a shunt instead.

The foregoing recital, so naked in its import, requires no further elaboration. However, recently I have encountered a broader and somewhat seductive philosophy embraced by some colleagues concerning the prophylactic value of shunts inserted as a preliminary measure, perhaps a week before a definitive suboccipital attack on large acoustic tumors. These surgeons have been impressed with the relaxed condition of the cerebellum at the time of tumor exposure, so that tumor excision can proceed more smoothly without recourse to ventricular drainage during and just after surgery.

Furthermore, pre-operative evidence of a communicating hydrocephalus or absorptive problem obtained by radioisotope cisternography has been considered an indication for a shunt even in the absence of obvious pressure symptoms such as headache, vomiting, papilledema, etc. The supposition advanced is that a shunt probably will be required at a later date in any event.

Several reasons come to mind that militate against this course of action. First, it involves 2 separate operations when 1 often suffices, especially in instances in which a total tumor removal has been achieved. This is consistent with Dott's[7] observation that the basilar arachnoiditis which sometimes occurs postoperatively is related to the high protein transudate generated by the remainder of this particular neoplasm. The most serious danger of the shunt procedure is the occurrence of a complication, particularly a septic ventriculitis which could delay or jeopardize the contemplated definitive surgery.

In conclusion, I think it is important to reaffirm these few tenets when dealing with intracranial space-occupying lesions.

1. Tenaciously search for the location of the mass by every reasonable diagnostic means.
2. Expose, verify by gross and microscopic study, and if possible, completely eradicate the tumor.
3. Employ shunt procedures only as a subsequent measure in those instances in which total excision of the lesion is not consistent with the patient's safety and in patients in whom hydrocephalus coexists.

NORMAN H. HORWITZ, M. D.
*Department of Neurosurgery*
*Washington Hospital Center*

## References

1. TORKILDSEN, A. A new palliative operation in cases of inoperable occlusion of the Sylvian aqueduct. Acta Chir. Scand., 1939, 82, 117.
2. SJÖGREN, I., GROTTE, G., and OLDRING, L. Choroid plexus papilloma and infantile hydrocephalus. Acta Paediat. Scand., 1964, 53, 182.
3. KAHN, E. A. Tumors involving the third ventricle. Clin. Neurosurg., 1961, 7, 79.
4. KELLY, R. Colloid cysts of the third ventricle. Analysis of twenty-nine cases. Brain, 1951, 74, 23.
5. MCKISSOCK, W. The surgical treatment of colloid cyst of the third ventricle. A report based upon twenty-one personal cases. Brain, 1951, 74, 1.
6. SACHS, E., JR., AVMAN, N., and FISHER, R. G. Meningiomas of pineal region and posterior part of 3rd ventricle. J. Neurosurg., 1962, 19, 325.
7. DOTT, N. M. Other benign tumors: Acoustic neuromas—the desirability and practicality of total removal. Excerpta Medica. International Congress Series No. 36, Second International Congress of Neurological Surgery, Washington, D. C., 1961, Abstract No. S9a.

- desirable associates
- office space
- ancillary services
- may be obtained thru

•

**A CLASSIFIED ADVERTISEMENT**

•

- in the MEDICAL ANNALS

## The Care of the Celebrity *

Fame and fortune sought after by most men when achieved add a hazard to medical care. The physician, conscious of the enormous social and economic responsibilities of his distinguished patient, may lose sight of the kernel of the medical problem wrapped in the chaff of his patient's obligations. The industrial physician has no trouble with diagnosis and treatment of the employee; but he may boggle at the responsibility of the care of the president of the corporation. The navy doctor can treat the sore toe of a midshipman with a shipshape dressing; for the admiral's sore toe he may find himself putting on such a magnificent dressing as will not fit into the shoe. The pinnacle of this problem faces the physician called to attend his king. Success in therapy may lead to knighthood with the flat of the sword to his shoulder; however, he may fail and feel the edge to his neck. In any event other thoughts besides the care of the patient invade his mind. He may recall that Dr. Roderigo Lopez, physician to Queen Elizabeth I, for improper treatment of his famous patient, was hanged, drawn and quartered.†

Howard B. Bruenn was a 39-year old Naval reserve officer on active duty at Bethesda Naval Hospital in 1944 when he first saw his famous patient, President F. D. Roosevelt. His case report in the April 1970 ANNALS OF INTERNAL MEDICINE, I think will be a classic of its kind.

His report indicates that heart failure was present unequivocally when Bruenn first saw his patient on March 27, 1944. Cough was the prominent symptom. There was slight fever (99), tachypnea, and dyspnea almost at rest. Rales were present. The heart was big, and there was a systolic murmur. The blood pressure was 185/108 mm. T1 was inverted. The chest x-ray showed "considerable increase in the size of the cardiac shadow." Could anyone doubt that President Roosevelt had heart failure and urgently needed digitalization? Bruenn had no doubt, but the President was not immediately digitalized "because of the exigencies and demands on the President." A distinguished committee apparently rejected Bruenn's simple advice and specific therapy was deferred.

The touchstone for treatment of the hero is whether or not it would meet standards for care of the indigent. In other words the great man should get at least as good care as the tramp off the street. Unfortunately "exigencies and demands" may preclude this.

REUBEN BERMAN, M.D.
*Minneapolis, Minnesota*

---

* Reprinted by permission from Minnesota Medicine, Volume 53, page 751, July, 1970.

† The execution was on the charge of attempted poisoning of her majesty.

## New Program for Infants Announced

The D. C. Society for Crippled Children, the Easter Seal Society at 2800 13th Street, N. W. now offers a new program to serve children below the age of 3 years. This augments their present program of pre-school classes, therapy sessions and clinics for children from 3 to 6.

Children enrolled in the new Infant Program are seen twice a month by the therapy staff. Occupational, speech, physical therapists and an early childhood development specialist, work with the children in a group and with each child individually. Parents have an opportunity to talk with the therapists and learn how they can be most helpful. While the children are with the therapists, one or both of their parents attend a group meeting with the staff psychologist where they discuss common problems encountered by parents of handicapped children.

Research in many areas of child development has shown that the earlier a child's mental or physical problems are analyzed and a therapeutic program begun, the better chance he has of growing toward normality. Children younger than three have come to the Society to work individually with therapists, but the new Infant Program also provides the children with group experience and readies him for later entry into nursery school.

The Infant program meets from 1:00 to 2:00 p.m. every other Thursday beginning November 5. Enrollment continues to be open until the group is filled. For information about enrolling children call 232–2342.

## Clinical Center Studies

The coöperation of physicians is requested in the referral of patients for a controlled clinical trial on the treatment of advanced ovarian carcinoma being conducted by the National Cancer Institute's Solid Tumor Service at the Clinical Center, National Institutes of Health, Bethesda, Md. 20014.

Previously untreated patients with serious or undifferentiated carcinomas Stages III or IV (International Classification) are needed for this study. Patients with ascites are of particular interest, since pretreatment assessment of aspects of the cell cycle, estimations of the effectiveness of each dose of administered drug, and other studies are performed on available tumor tissues prior to therapy.

Upon completion of their studies, patients will be returned to the care of the referring physician who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may write or telephone Dr. Vincent T. DeVita, Clinical Center, Room 12-N-226, National Institutes of Health, Bethesda, Md., 20014; or telephone: (301) 496–4916, or Dr. Robert C. Young, Clinical Center, Room 4-B-13, National Institutes of Health, Bethesda, Md., 20014; or telephone: (301) 496–2031.

---

The coöperation of physicians is requested in the referral of men with proven infertility or problems of hypergonadism for clinical studies being conducted by the National Institute of Child Health and Human Development's Reproduction Research Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland, 20014.

Endocrine studies and semen analysis will be performed as indicated, and selected patients may undergo more intensive studies and therapy. Upon completion of their studies, patients will be returned to the care of the referring physician who will receive a summary of findings.

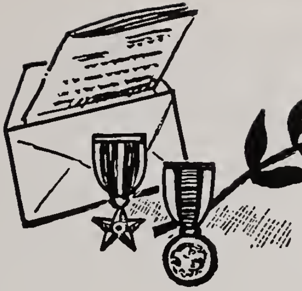
Physicians interested in having their patients considered for admission to these studies may write or telephone Dr. Richard J. Sherins, Clinical Center, Room 12-N-206, National Institutes of Health, Bethesda, Maryland 20014, or Dr. Griff T. Ross, Clinical Center, Room 10-B-09, National Institutes of Health, Bethesda, Md.; or telephone: (301) 496–4686.

Surgical Supplies and Equipment

*Complete Fitting Service for*
*Ladies and Men*

**KLOMAN SURGICAL SUPPLY CO.**
**1028 19th Street, N.W.**
**Washington, D. C. 20036**

***Telephone:* 223-3444**



# News & Personals

## SUMMARY OF EXECUTIVE BOARD ACTIONS

### Proceedings of the November 23 Meeting.

Prior to dinner, Dr. Raymond Holden appeared informally to thank all Board members for their support of him for reelection to the A.M.A. Board of Trustees.

Dinner was served for Board members in the Exhibit Hall of the Medical Society. Present were Drs. Robert J. Coffey, Chairman, Henry D. Ecker, William S. McCune, Frank S. Pellegrini, Marvin C. Korengold, Howard Katzman, James E. Boland, John J. Hughes, C. Willard Camalier, Jr., and Mrs. Lucille Smith, representing the Executive Director. Dr. Arthur Wentz was present by invitation.

The executive session of the Board was called to order at 7:10 p. m. by the Chairman, Dr. Robert J. Coffey.

The Board voted an expression of deep sympathy on the death of Mr. George McGovern, former president of the Medical Service of D. C.

The Board moved to accept the Regional Medical Program Report as presented by Dr. Arthur Wentz during dinner.

The minutes of the October 26 meeting were approved as submitted.

**Committee Meetings**: The Secretary reported the following committees had met since the last meeting of the Board:

| | | |
|---|---|---|
| October | 27 | Drug Abuse |
| | 30 | Emergency Medical Services<br>Medical Bureau |
| November | 5 | Physician Placement<br>Medical Ethics & Professional Conduct |
| | 10 | Board of Credentials |
| | 11 | Legislative<br>Fee Review |
| | 12 | Blood Banks |
| | 13 | Utilization |
| | 16 | Environmental Health |
| November | 17 | Grievance |
| | 18 | Mental Health |
| | 19 | Traffic |

Special Meetings

| | | |
|---|---|---|
| October | 28 | Dr. Bacon's meeting regarding Medicaid |
| November | 9 | Subcommittee on Legal Counsel |
| | 13 | Annals Subcommittee |
| | 18 | Ad Hoc Committee on Health Foundation<br>Annual Business Meeting |

**Board of Credentials**: On recommendation of the Board of Credentials, 7 applicants were elected to Active membership, 3 to Associate and 1 to Resident-Intern membership. Their names appear on page 61. Approval was given to the following changes in membership status:

*Transfers*

*Active to Associate:* Irwin Jaffee and Frank J. Talbot

*Resignations*

*Active:* J. Roscoe Creer, Banad N. Viswanath, Clifton R. Brooks, and Jules S. Neviaser.

*Associate:* Harold G. Beeson, Herbert Gates, and Philip L. Repetto

*Reinstatement*

*Active:* Richard F. Maingold

**Medical Bureau:** Mrs. Smith made the following points regarding the present status of the Medical Bureau: (1) The 3 work shifts for 24-hour coverage had the work hours revised (2) The Medical Ethics and Professional Conduct Committee and the Medico-legal Committee have been requested to prepare guidelines that would assist the Bureau Committee in the handling of Bureau subscribers (3) Arrangements have been made with the C & P Telephone Company for priority in repair and maintenance service (4) Permanent changes in a subscribers service or instructions must be submitted to the Bureau in writing (5) Policy statements for the Medical Bureau have been drafted. Pending Committee approval, the policy statements will be sent to all subscribers in an effort to clarify Bureau as well as subscriber responsibilities (6) A canteen is being investigated that would provide snack foods for operators, especially during inclement weather or on weekends. The Board approved the report as submitted and expressed confidence in further improvement of the Medical Bureau and its service to subscribers.

**Relative Value Study Committee**: The Committee recommended amendment as follows:
approved motion:

The Relative Value Study Committee recommends to the Executive Board the acceptance of the A.M.A.'s *Current Procedural Terminology* and upon acceptance, submission to the Medical Society's sections along with the California Relative Value scale for appropriate revisions.

A motion was made and carried to approve the recommended amendment as follows:

The Relative Value Study Committee recommends to the Executive Board the acceptance of the A.M.A.'s *Current Procedural Terminology.*

Upon acceptance, the committee recommends the referral of the *Current Procedural Terminology* to the sections and subsections of the Medical Society for the assigning of suggested unit values and a conversion factor, using the 1969 California Relative Value Study as a guide.

The Relative Value Committee further suggests that the concept of "modifiers" as employed in the California Relative Value Study be considered in the implementation of the A.M.A.'s *Current Procedural Terminology.*

**Foundations for Medical Care**: Dr. C. Willard Camalier presented a report on the Medical Foundations established in California and Minnesota. The Board voted unanimously to accept this report as information.

**The 1975 Bicentennial Celebration of the Declaration of Independence**: Dr. Pelligrini read a letter from Dr. Samuel B. Hadden, a member of the Pennsylvania Medical Society, and chairman of a subcommittee to plan the historical and commemorative aspects of medicine for the celebration to be held in Philadelphia. In the letter, Dr. Hadden requested that the Medical Society of the District of Columbia submit and exhibit of historical interest for the celebration. Based on the fact that the District of Columbia has had many medical firsts, the Board unanimously agreed that the Society submit an exhibit. Dr. Korengold was asked to discuss this with the Committee on Continuing Education.

**Legal Counsel**: John Lewis Smith, III has been selected as the new legal counsel for the Medical Society of the District of Columbia, his service beginning January 1, 1971.

**Committee Chairmen**: On Dr. Korengold's recommendation, a motion was made and carried that Dr. Edward E. Ferguson and Dr. Eugene A. Clark be reappointed Chairman and Vice Chairman of the Board of Credentials for 1971.

**The Royal Society of Medicine**: Dr. Pelligrini reported that members of the Medical Society of the District of Columbia will be offered membership in the Royal Society. All members will be notified via the December issues of the Medical Annals and the Society Newsletter. Specific details and a letter of information will be forwarded to all members through the Royal Society's offices in London on or about January 1, 1971. A motion was made and carried to accept this as information.

**Legislative Committee**: After reviewing recommendations submitted to the Board by this committee, a motion was made and carried that the Medical Society go on record as supporting the proposed implied consent law–H. R. 12317 by submitting a letter to the Commissioner. A second motion was made and carried that the Executive Board send a letter to the Department of Health, Education and Welfare recommending that St. Elizabeth's Hospital be transferred to an independent governing body. A copy of this letter would be sent to the Washington Psychiatric Society for preparation of a Bill to submit to Congress. After discussing the merits of obtaining the services of a paid legislative assistant on a part-time basis, a third motion was made and carried to defer any action until further inquiries into possible legislative assistance from the Washington A.M.A. office could be made by Dr. Hughes and Dr. Camalier while they are in Boston at the A.M.A. Clinical Convention.

**Blood Banks Committee**: After reviewing the recommendations submitted to the Board by this committee, a motion was made and carried that the Medical Society go on record as opposing the proposed New York law allowing for a tax credit to be given for voluntary blood donations. A second motion was made and carried to defer and table the recommendation that the Blood Banks Committee be named the Transplantation Committee and/or incorporated with such a newly designated committee.

**Woman's Auxiliary**: Mrs. O. Hugh Fulcher, through a letter to Dr. Pellegrini, requested that the Medical Society approve of the Woman's Auxiliary endorsing a trip to the Orient through the Universal Travel Service. A motion was made and carried to approve the Auxiliary's endorsement of this trip to the Orient. Travel information and brochures may be sent to all members of the Medical Society; however, there is to be no financial involvement on the part of the Medical Society nor will any labor be required on the part of the Society employees. Information will clearly indicate that participation is open to all members of the Medical Society; however it is not sponsored by the Medical Society.

**D. C. General Hospital Governing Board:** Dr. Pellegrini informed the Board that Mayor Walter Washington had created a 24-man governing board to set policy for D.C. General Hospital. This announcement was published in local newspapers on November 4, 1970. Dr. Pellegrini pointed out that the Medical Society's counsel and opinion was not sought in the creation of this Board nor was there provision for Society representation on the governing board. Dr. Pellegrini stated that for the past 2 years the society president had worked toward developing a close and effective liason with the directors of the D. C. Government and its Health Department. Therefore, Dr. Pellegrini asked that the Society speak out about being ignored in the establishment of the governing body. A motion was made and carried that Dr. Pellegrini ask the Medicochirugical Society to join with the Medical Society of D. C. to express discontent with the manner of creation of this board.

**D. C. Mental Health Department Director:** Dr. Pellegrini referred to the appointment of Dr. Essex C. Noel, III as new director for the D. C. Mental Health Program, and pointed out that this decision was also made without consultation with the Medical Society. A motion was made and carried that Dr. Pellegrini ask the Medicochirurgical Society to join with the Medical Society of D. C. to express discontent with the manner of this appointment.

**Environmental Health Committee:** A motion was made and carried to accept the recommendation of this committee that the Society be represented in support of the proposed criteria for ambiant air quality at the public hearing on November 30, relative to carbon monoxide, photochemical oxidants, and hydrocarbons, as outlined by the District of Columbia Department of Human Resources.

**National Academy of Sciences Pilot Program:** Dr. Pellegrini reported on his meeting with Dr. David Kessner, Director of the National Academy of Sciences. The National Academy of Sciences is undertaking a pilot project in which they will interview private physicians regarding "Contrasts in health status: a comparative inquiry into the health needs, barriers, and resources of selected populations groups." A motion was made and carried to endorse the National Academy of Science's collection of medical information from individual physicians.

**Department of Human Resources Peer Review Committee for Blue Plains:** Dr. Pellegrini requested the Board's approval of his signing the official agreement between the Department of Human Resources of the District of Columbia and the Medical Society for a peer review committee for Blue Plains. The contract submitted to Dr. Pellegrini was a provisional one in which the Medical Society would supply at least 2 physicians for the Peer Review Committee of Blue Plains. This contract is renegotiable at any time by either party. A motion was made and carried to approve Dr. Pellegrini's signing of this contract which will obligate the Medical Society of the District of Columbia to provide the necessary representatives for the Blue Peer Review Committee.

There being no further business the meeting was adjourned at 9:40 p. m.

Investment Advisory
Service for Physicians

For a descriptive booklet,
write or call 293-4583.

FERRIS & COMPANY

Members New York Stock Exchange
1720 Eye Street N.W.
293-4500
Bethesda Rosslyn

Con-
ven-
ience!

**Dicarbosil**®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

*KALORAMA CONVALESCENT HOME, INC.*

Licensed by the
D. C. Department
of Licenses and
Inspections

INSTITUTIONAL CARE
for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

New Nilcol-
A Comprehensive
Formula:

| DESCRIPTION | Contents in mg<br>Tablet | Elixir—each 15 ml |
|---|---|---|
| phenylpropanolamine HCl | 50 | 25 |
| chlorpheniramine maleate | 4 | 2 |
| glyceryl guaiacolate | 200 | 100 |
| dextromethorphan HBr | 30 | 15 |
| alcohol | | 10% |

The scored, elliptical tablet is light violet. The elixir is deep violet in color and grape-flavored.

ACTIONS Each component of Nilcol has been selected to provide symptomatic relief of congestion and cough in upper respiratory disorders.

Phenylpropanolamine hydrochloride is a vasoconstrictor which reduces congestion of the nasopharyngeal mucosa. Chlorpheniramine maleate, a widely used antihistamine, helps to control allergic symptoms. The expectorant is glyceryl guaiacolate which helps to increase the secretion and decrease the viscosity of fluids of the respiratory tract. Dextromethorphan is a well-known, centrally acting antitussive. Nilcol may minimize the need for topical decongestants.

INDICATIONS Nilcol is indicated for nasal and bronchial congestion; coughs and other symptoms of respiratory infections including influenza and the common cold; other respiratory conditions such as sinusitis, allergic rhinitis or hay fever.

CONTRAINDICATION Hypersensitivity to any ingredient.

PRECAUTIONS Because of the possibility of drowsiness, patients should be cautioned against driving and operating machinery. Administer with caution to patients with hyperthyroidism, hypertensive cardiovascular disease, diabetes mellitus and liver disease. Use in pregnancy is not recommended.

ADVERSE REACTIONS Anxiety, restlessness, tension, insomnia, tremor, weakness, headache, vertigo, sweating, nausea, and vomiting may possibly occur.

SUPPLIED Tablets in bottles of 100. Elixir in bottles of 32 fl oz (1 qt) with dosage cups. N-GP-11-4C

**WARNER-CHILCOTT**
Morris Plains, New Jersey 07950

This is a test of this publication's advertising "Exposure." Please see below.

# Introducing The Fully Therapeutic "Age-Calibrated" Non-Narcotic Cough/Cold Formula... For Any Member Of The Family*

*Nat far infants under 2 yoars af age.

# New Nilcol™ ℞ Tablets/Elixir

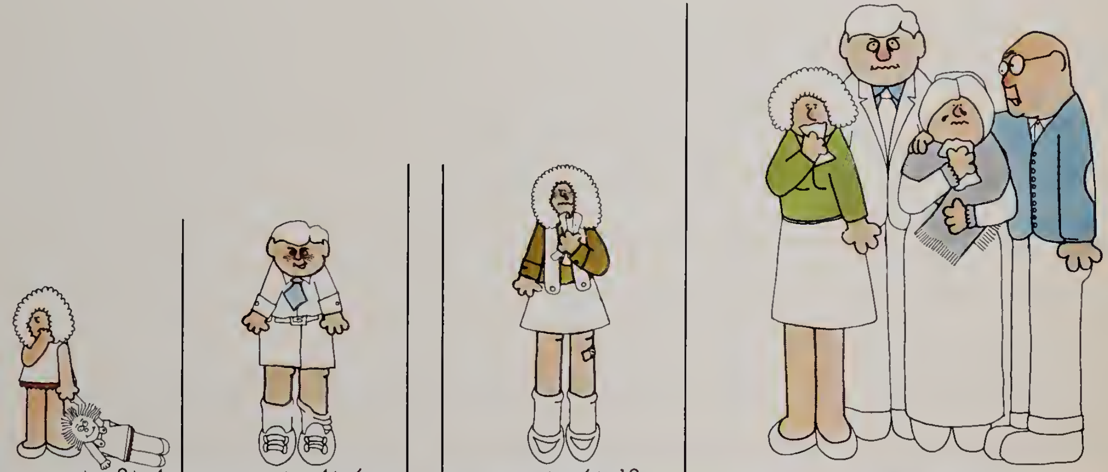
Each scored tablet contains: Phenylproponalomine HCl 50 mg, Chlorpheniromine maleate 4 mg, Glyceryl guoiacalate 200 mg, Dextrometharphan HBr 30 mg.
Eoch 15 ml of elixir contains: Phenylproponolomine HCl 25 mg, Chlorpheniromine maleate 2 mg, Glyceryl guaiacalate 100 mg, Dextramethorphan HBr 15 mg, alcahal 10%.

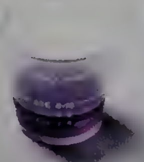
## An Expectorant • An Antihistamine
## A Decongestant • A Non-Narcotic Antitussive

---

For a complimentary package, send your Rx with the name Nilcol written on it to:
Warner-Chilcott Laboratories, 201 Tabor Road, Morris Plains, New Jersey 07950.
Att: M. Adams, St.J.

---



| Prescribe 3 or 4 times daily | youngsters 2 to 4 | youngsters 4 to 6 | youngsters 6 to 12 | grown-ups |
|---|---|---|---|---|
| Quick-Snop-Apart **Tablets** | | | ½ toblet | one toblet |
| Delicious, Grope-Flavored **Elixir** | 5 ml (1 tsp) † |  10 ml (2 tsp) | ½ oz (1 tbs) | 1 oz (2 tbs) |
| ℞ (4 doys — no-woste therapy) | 3 oz | 6 oz | 8 oz | 16 oz |

†Plus "Age-Calibrated" Medicine Cup far Precisian-Assured Dasage.

# D.C. HEALTH NOTES

## Podiatry Screening Project of School Children in the District

A 3-year podiatry survey of nearly 9,000 school children in the District of Columbia revealed that 37% of the children have foot disorders that could cause them serious problems in later life.

The foot-screening project was undertaken by the D.C. Health Services Administration of the Department of Human Resources in coöperation with the D.C. Board of Education and the Podiatry Associations of the District of Columbia, Maryland and Northern Virginia.

The principal purpose of the podiatry program in the school system is to detect foot disorders before serious problems occur.

According to Dr. Jerome Shapiro, supervisory podiatrist for the D.C. Health Services Administration, "many of the foot disorders in adults begin in childhood." He pointed out that identification and prompt treatment during child-hood will prevent, or at least minimize, many foot ailments in adults. Dr. Shapiro is in charge of the podiatry-screening program.

The screening of young children for foot disorders started in 1967 as a pilot project for inner-city children aged 5-12 years. There were 1,062 children examined during the pilot project. Some abnormalities were detected, and 20% of the group required further examination, further treatment, or both.

In addition to pathological conditions, the examiners found that 320 children were wearing inadequate footgear, mostly shoes that were too short. Another 322 children evidenced extremely poor foot hygiene.

According to podiatrists who participated in the pilot study, the foot bones of many children with orthopedic disorders had already developed beyond the point of maximum response to treatment. For this reason, the podiatrists recommended that the screening be extended to the preschool population.

Following the pilot project, officials of the D.C. Health Services Administration and Board of Education made plans for continuing the program on an expanded basis. In 1968, pupils in 9 elementary schools were screened, and in 1969, the program was extended to include 41 additional schools, with examinations limited to kindergarten students and preschool children.

During the years of 1967-69, a total of 8,995 children were screened under the program. Of that number, 5,181 were under 6 years of age.

Abnormal foot posture, orthopedic disorders of the feet, or both, were found in 3,363 children, or 37 % of the total number of children screened. The second most common problems were poorly fitted shoes, followed by skin abnormalities, gait deviations, and nail abnormalities.

The same difficulties seemed to affect both girls and boys, but it was found that more girls were having foot problems, due perhaps to footgear which did not fit properly.

Of the 3,363 children with postural abnormalities, such as flat feet, hammertoes, extremely high arches, and other orthopedic conditions, flat feet were the most frequent. But more than half of the children with flat feet required no treatment. Some were referred for treatment, while others were asked to return for further examination.

The screening identified youngsters with foot problems while those conditions were still in the early stages and when they could be treated early.

In addition to the benefits of preventing adult foot ills, treatment of minor foot abnormalities early in life provided comfort for the children.

As an additional benefit, mass screenings draw the attention of the community, parents, teachers and the children themselves to the importance of proper foot health.

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*D.C. Health Services Administration*

**OFFICE SPACE AVAILABLE**
**April 1, 1971**

**New Building in Eye Street Medical Center**

**Ideal location for small health or medically-oriented organization**

**Fourth floor suite (704 sq. ft. @ $5.50) consisting of large central area and 9 spacious private offices with windows**

**Central heating and air-conditioning; modern decor; elevator**

**Address: Box 30**
**2007 Eye Street, N.W.**
**Washington, D. C. 20006**

sterile solution (300 mg. per ml.)

# Consider Lincocin®

(lincomycin hydrochloride monohydrate, Upjohn)

NDC 9-555-2 No. 8048
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES →
2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride injection)

For your convenience
in 2 ml. and 10 ml. vials...

and single-dose 2 ml.
disposable syringe

by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

**Upjohn** THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 49001

When irritable colon feels like this

The blowfish, a small spe
of fish, reacts to stress or
fright by puffing itself up
air. After about a dozen
noisy gulps the belly is ba
shaped and hard. When
replaced in the water the
quickly expelled, and
the fish sinks to the botto

## ..in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

**☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension**

**Composition:** Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
**Contraindications:** Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
**Precautions:** Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
**Side effects:** Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
**Dosage:** Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

**STUART PHARMACEUTICALS** | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

# KINESED®

antispasmodic/sedative/antiflatulent

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

### Chromuim-51 Scanning in Placenta Praenia—Bagley and Bodek

(*Continued from page 3*)

10. SMITH, R. W., FISH, M. B., SELINGER, H. E., KHENTIGAN, A. and WEBER, P. M.: Obstet. Gynec., 1970, 35, 537.
11. KOHORN, E. I., SECKER WALTER, R. H., MORRISON, J. and CAMPBELL, S.: Amer. J. Obstet. Gynec., 1969, 35, 537.
12. GAHRES, E. E., ALBERT, S. N. and DODEK, S. M.: Obstet. Gynec., 1962, 19, 455.
13. BOSCH, E. G. and STEIGRAD, S. J.: Med. J. Aust., 1968, 1, 63.
14. EASTMAN, N. J. and HELLMAN, L. M.: Williams' Obstetrics, 13th edition. New York: Appelton-Century-Crofts, 1966, p. 621.
15. MACAFEE, C. H. G., MILLER, W. GORDON, 2nd HARLEY, G.: J. Obstet. Gynaec. Brit. Comm., 1962, 69, 203.
16. GREEN, G. H.: J. Obstet. Gynaec. Brit. Comm., 1959, 66, 640.
17. STALLWORTHY, JOHN: Amer. J. Obstet. Gynec., 1951, 61, 720.
18. SEMMENTS, J. P.: Postgrad. Med. J., 1968, 44, 207.
19. DODEK, S. M., GREENHOUSE, C. S. and GOODRIDGE, T. H.: Southern Med. J., 1968, 61, 1223.

### Anti-Diuretic Hormone in Cirrhosis Liver—Danovitch et al

(*Continued from page 18*)

8. GABUZDA, G. J., JR., TRAGER, H. S., and DAVIDSON, C. S.: J. Clin. Invest., 1950, 29, 814.
9. SCHEDL, H. P., and BARTTER, F. C.: J. Clin. Invest., 1960, 39, 248.
10. SHEAR, L., HALL, P. B., and GABUZDA, G. H., JR.: Amer. J. Med., 1965, 39, 199.
11. RALLI, E. P., ROBSON, J. S., CLARKE, D. H., and HOGLAND, C. L.: J. Clin. Invest., 1945, 24, 316.
12. CHAUDHURY, R. R., CHUTTANI, H. K., and RAMALINGASWANI, U.: Clin. Sci., 1961 21, 199.
13. LAUSEN, H. D.: Amer. J. Med., 1967, 42, 713.
14. LUTHRA, M. S., SCHERL, N. D., GOLDEN, D., and COLLICA, C. J.: Arch. Intern. Med., 1968, 122, 211.
15. CASTELL, D. O., and JOHNSON, R. B.: New Eng. J. Med., 1966, 275, 188.
16. COOPER, J. N., FERNANDZ, J. P., O'ROURKE, R. A., and MULLAN, J.: Clin. Res. (abstract), 1969, 17, 300.
17. LIEBOWITZ, H. R.: New York J. Med., 1969, 69, 1895.
18. LOSOWSKY, M. S., and DAVIDSON, C. S.: Arch. Intern. Med., 1962, 110, 279.
19. ATKINSON, N., and LOSOWSKY, M. S.: Quart. J. Med., 1961, 30, 153.
20. DeWARDENER, H. E., MILLS, I. H., CLAPHAM, W. F., ET AL: Clin. Sci., 1961, 21, 249.

# DOCPAC BRIEFS

## Medical Politics

"Get off your apathy" was the slogan of the most recent UGF campaign. Somehow or other I did not like it, but I recognized that it was an attempt to wake up our citizens to the fact that a great deal of desperately needed charity work is not being done because those who can help never get around to doing their part. The same situation is true, and even more so, in the realm of political action as exercised by doctors. Our profession is being attacked from many sides. Indeed it seems that the "in thing" with many politicians and journalists is the condemnation of just about everything in the current medical set-up. On all sides we are being told that the health-care delivery system is antiquated, inefficient, and incapable of doing the job necessary. Doctors are under attack and pictured as charging excessive fees and chiseling the insurance companies and the government, in addition to their patients. Exaggerations and misstatements are so common that the Hitlerian big lie technique of repeating a falsehood often enough until it is believed may soon be a fact of life; and Congress is not only listening, but its own members are finding it necessary to consider laws which will bring about very radical changes in the way that medicine is practiced by just about every physician in the country. Organizations with millions of dollars at their command are spending money to elect senators and representatives who will vote for those changes. Despite this, less than 150 members of the medical profession in this city are interested enough to join the only organization raising money to tell Americans and Congress the true facts of life so far as the individual doctor is concerned, namely, the District of Columbia Political Action Committee. With the election over, the apathy may be even worse; yet, the next few years may be the most crucial of all. DOCPAC along with AMPAC will be doing its best to present honestly medicine's point of view. So get off your apathy and join—or would you rather practice under the British system of capitation (which is one of the pertinent features of the bill recently introduced by an extremely strong group of senators)?

DARRELL C. CRAIN, M.D.
*President-Elect*
*Medical Society of the*
*District of Columbia*

# ►NATIONAL & REGIONAL MEETINGS

February 14–15: AMA Congress on Medical Education (6th Annual). Chicago. Address: Dr. C. H. William Rube, AMA Council on Medical Education, 535 N. Dearborn Street, Chicago 60610.

February 20–24: American Academy of Allergy. Chicago. Address: Mr. James O. Kelly, 756 N. Milwaukee Street, Milwaukee 53202.

February 20–27: American Society of Clinical Pathologists and College of American Pathologists (Joint Interim Meeting). The Dunes, Las Vegas. Address: Mr. Albert G. Boeck, Executive Director, 710 S. Wolcott Avenue, Chicago 60612.

March 6–11: American Academy of Orthopedic Surgeons. San Francisco. Address: Dr. Charles V. Heck, Director, 430 N. Michigan Avenue, Chicago 60611.

**March 7–11: Society of Toxicology. Shoreham Hotel, Washington, D.C. Address: Joseph F. Borzelleca, Ph.D., Secretary, Department of Pharmacology, Medical College of Virginia, Richmond 23219.**

**March 21–24: American Orthopsychiatric Association. Shoreham and Park Sheraton Hotels, Washington, D.C. Address: Marion F. Langer, Ph.D., Executive Director, 1790 Broadway, New York, 10019.**

March 28–April 2: American College of Physicians. Denver. Address: Dr. Edward C. Rosenow, Jr., Executive Director, 4200 Pine Street, Philadelphia, 19104.

March 29–April 3: American College of Radiology. St. Louis. Address: William C. Stronach, LLB, Executive Director, 20 N. Waxker Drive, Chicago 60606.

April 19–22: Southeastern Surgical Congress. Miami Beach, Florida. Address: Dr. A. H. Letton, Secretary-Director, 340 Boulevard N.E., Atlanta 30312.

April 26–27: AMA Congress on Environmental Health (Solid Waste Management). New York City. Address: AMA Department of Environmental Health, 535 N. Dearborn Street, Chicago, 60610.

April 26–May 1: American Academy of Neurology. New York City. Address: Mr. Stanley A. Nelson, Executive Secretary, 4005 W. 65th Street, Minneapolis 55435.

**April 29–May 3: American Psychoanalytic Association (Annual Meeting). Shoreham Hotel, Washington, D.C. Address: Mrs. Helen Fischer, Executive Secretary, 1 E 57th Street, New York 10022.**

# ►NEW MEMBERS

### Active

JOSEPH WALTER GIERE, M. D. Office: 3800 Reservoir Road, N. W. Born in Cambridge, Massachusetts. Medical degree: Georgetown University, 1962. Speciality: Obstetrics & Gynecology.

MERRILL H. GOODWIN, M. D. Office: Aerospace Medical Association, Washington National Airport. Born in Selma, Indiana. Medical degree: Indiana University, 1936. Speciality: Aerospace Medicine.

BARTOLOME A. JAVATE, M. D. Office: D. C. General Hospital. Born in Manica, Philippines. Medical degree: University of the Philippines, 1958. Speciality: Pediatrics.

JOSEPH LINDSAY, M. D. Office: 2150 Pennsylvania Avenue. Born in Charlotte, North Carolina. Medical degree: Emory University, 1958. Specialty: Internal Medicine, Cardiology.

MAURICE McFARLAND, M. D. Office: 37 Missouri Avenue, N. W. Born in Kingston, Jamaica. Medical degree: Howard University, 1966. Specialty: Dermatology.

STANLEY M. PERL, M. D. Office: 1310 Southern Avenue. Born in Pittsburgh, Pennsylvania. Medical degree: University of Pittsburgh, 1964. Specialty: Radiology.

### Associate

JOYCE C. DONOHUE, M. D. Office: Commonwealth Doctors' Hospital, Fairfax City. Born in New York City. Medical degree: Georgetown University, 1963. Specialty: Radiology.

JEROLD J. PRINCIPATO, M. D. Office: 10401 Old Georgetown Road, Bethesda. Born in New York City. Medical degree: State University of New York, Downstate, 1965. Specialty: Otolaryngology.

WOONG SOON YIM, M. D. Office: Glenn Dale Hospital. Born in Choong Nam, Korea. Medical degree: Yonsei University, 1963. Specialty: General Practice.

### Resident-Intern

JAMES F. ROBINSON, III, M. D. Office: Freedman's Hospital. Born in Indianapolis, Indiana. Medical degree: Howard University, 1965.

Gone wit

### The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

### Frees captured gas...neutralizes free acid

Silain-Gel Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

### Always in good taste

The pleasant, distinctive flavor of Silain-Gel, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of Silain-Gel you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

*when the patient prefers the convenience of a tablet, select*

**Silain-Gel® Tablets:**

*when the patient prefers a liquid, select*

**Silain-Gel® Liquid**

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

## Announcing the "Antgasid"

# Silain-Gel®

**Tablets:** simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide

**Liquid:** simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

*THE PHARMACOLOGICAL BASIS OF THERAPEUTICS*
*3rd Edition, page 522*

# ANTROCOL®

***Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.***

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
*Tablet in bottles of*
*100, 500 and 5000*
*Capsule in bottles*
*of 100, 500 and 1000*

Caution: Federal law prohibits dispensing without prescription.

### Prescribing Information

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

Dosage: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

*Clinical supply available to physicians.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
*Manufacturers of Ethical Pharmaceuticals*

# ►GENERAL NEWS

**Dr. Julius B. Richmond (left) noted pediatrician and first director of the National Head Start Program, received the John Fitzgerald Kennedy Memorial Lectureship Award from Matthew F. McNulty, Jr. (right), Georgetown University vice president for Medical Center Affairs. Looking on is Dr. Philip L. Calcagno, chairman of the Department of Pediatrics at Georgetown. The department presents the award annually. Dr. Richmond gave the lecture on "Head Start–Five Years Later" at Georgetown on November 20. He is currently dean of the medical faculty of the State University of New York College of Medicine at Syracuse and professor and chairman of the Department of Pediatries there. In January 1971 Dr. Richmond will become professor of Child Psychiatry and Human Development at Harvard Medical School and psychiatrist-in-chief at Childrens Hospital Medical Center, Boston.**

A **Vincent T. Lombardi Cancer Research Center** will be established at **Georgetown University** in memory of the former coach of the Green Bay Packers and the Washington Redskins. The center will provide a multi-discipline approach to research in the field of human cancer, and it also will provide facilities of the most sophisticated nature for the diagnosis, care and rehabilitation of cancer patients. Mrs. Marie Lombardi, widow of Mr. Lombardi, will serve as honorary chairman of a national committee to assist in developing resources for the Research Center. Charter members of this group include: Col. Earl H. Blaik, former coach and athletic director at West Point, and former vice-president of Avco Corporation; Richard Bourguignon, president of Elmer Dennissen Real Estate, Green Bay, Wisconsin; **Dr. Robert J. Coffey**, who performed surgery on Mr. Lombardi at Georgetown University Hospital; Col. O. C. Krueger, a long-time friend of the family; R. B. Levitas, chairman of the board, Juillard Alpha Co., Brisbane, California; Vincent Lombardi, son of the former coach; Pete Rozelle, commissioner of the National Football League and Edward Bennett Williams, president of the Washington Redskins and a Georgetown Alumnus.

Contributions to the Vincent T. Lombardi Cancer Research Center should be sent to: Lombardi Memorial-Georgetown, Georgetown University Medical Center, Washington, D.C. 20007.

Dr. Robert Angle, a Bethesda internist, has been elected 67th President of the 800 member **Montgomery County Medical Society**. Dr. Angle is a native of Ohio, and was graduated from the Loyola University School of Medicine in Chicago.

Dr. H. Marvin Pollard, professor of internal medicine at the University of Michigan has been named president of the **American Cancer Society**.

A diet counseling service for cardiovascular patients is available through the Washington Heart Association. This service is available to patients on physician referral at no cost to either patient or physician. The Association's Nutrition Consultant will counsel patients on various diets including sodium restricted diets, diabetic diets, and diets for the 5 types of hyperlipoproteinemia. Physicians may authorize patient counseling by phoning the Washington Heart Association (296-4697).

The **Georgetown University School of Medicine** has received a grant in the amount of $72,964 from the John A. Hartford Foundation to determine the effects on the lungs during shock and trauma. The solutions under study will include saline solutions, dextrans and blood, all of which are used in treating hemorrhagic shock patients. Researchers at Georgetown will also study the effects trauma and shock themselves have on the lungs.

The work is being done at Georgetown's Surgical Metabolic Research Laboratory under the Direction of Dr. John S. Dillon, assistant professor of surgery. Co-principal investigator is Dr. Robert J. Coffey, professor of surgery.

Dr. Charles F. Whitten, Associate Professor of Pediatrics at Wayne State College of Medicine in Detroit, Michigan, will serve as **Visting Professor of Pediatrics at Howard University** the week of April 12, 1971. He will hold conferences on a number of important subjects including salicylate poisoning, iron poisoning, salt intake of patients, maternal deprivation, and unmet needs of individuals with sickle cell anemia.

By a vote of 298-32, the House of Representatives adopted S. 2108, the **Family Planning Services and Population Research Act of 1970**. As approved, the bill provides financial assistance to public and private non-profit organizations to assist in the establishment and operation of voluntary family planning projects and makes available project grants to State health authorities to assist them in planning, establishing, maintaining, coordinating, and evaluating family planning services. Funds are also available for grants and contracts to train personnel in the provision of family planning services, and for research in population and family planning.

Dr. David P. Boyd, a Boston Thoracic Surgeon, was named president-elect of the 9,000-member **American**

AMERICAN CANCER
District of Columbia Division, Inc.

Dr. LaSalle D. Leffall, Jr. (left), Professor and Chairman of the Department of Surgery at Howard University, and Dr. S. Joseph Cosimano (right), President of the American Cancer Society, D.C. Division, accept the 1970 National Honors Citation for the Division's "Outreach Program" which emphasizes door-to-door, person-to-person cancer education programs. The award was presented by Mrs. Wilfred D. Keith, Vice President of the American Cancer Society and Chairman of the Public Education Committee at the semi-annual dinner of the District of Columbia Division at the Washington Hilton Hotel on November 19, 1970.

**College of Chest Physicians.** Dr. Boyd is on the staff at the Lahey Clinic in Boston.

Three professors have recently been named at Georgetown University Medical Center. **Dr. Robert F. Donohoe**, an authority on tuberculosis and other pulmonary diseases and clinical chief at Georgetown's Medical Division at D.C. General Hospital, has been promoted to professor of medicine. Also promoted to professor of medicine is **Dr. Joseph K. Perloff**, a cardiologist, and author of numerous articles on cardiology research and a recently published book on congenital heart disease. In the Department of Pediatrics, **Dr. Joseph A. Bellanti**, who has received national recognition for his research in immunology-virology, has been promoted to full professor.

**Dr. William B. Walsh**, a man whose dedication and imagination have helped provide health care to thousands around the world, was recipient of the **1970 Stritch Medal**, presented during the Annual Award Dinner of the Loyola University Stritch School of Medicine on November 24. The Stritch Medal emblematic of the high ideals and accomplishments of medicine, is named after the late Samuel Cardinal Stritch, Roman Catholic Archbishop of Chicago from 1939 to 1958.

On December 1, the House of Representatives approved **legislation to increase the number of family physicians** in the United States. The vote on H. R. 19599, an amendment to the Public Health Act, was 346-2. The bill authorizes the appropriation of 425 million dollars over a 5-year period to support the training of teachers to teach family medicine, and the training of paramedical personnel to assist family physicians in their practice.

Dr. William C. Keetels, Professor and Chairman of the Department of Obstetrics and Gyncecology at the University of Iowa, has been elected president-elect of the **American Association of Obstetrics and Gynecologists.** He is also president of the American Association of Professors of Obstetrics and Gynecology.

**Dr. Andre Hellegers**, professor of obstetrics and gynecology, at Georgetown University Medical Center, has been elected president of the Perinatal Research Society, an organization composed of 90 American and Canadian professors of obstetrics and gynecology, pediatrics, and the basic sciences. Other Georgetown University members are **Dr. Paul Bruns**, professor of obstetrics and gynecology and **Dr. Thomas King**, professor of biology.

Paul C. Adkins, M.D.

**Dr. Paul C. Adkins** has been named Chairman of the Department of Surgery at the George Washington University Medical Center. He succeeds Dr. Brian Blades, who remains as Lewis Saltz Professor of Surgery. Dr. Adkins, a member of the G. W. faculty for 16 years, is also Director of the Division of Thoracic and Cardiovascular Surgery. He conducts surgical research, is active in the field of thoracic and cardiovascular surgery, and is the author of approximately 60 papers in his specialty.

The new G. W. surgery chairman is Associate Editor of the *Journal of Thoracic and Cardiovascular Surgery* and a member of the Editorial Board of *Postgraduate Medicine.* He is a member of the American Board of Thoracic Surgery and treasurer of the American Association for Thoracic Surgery. He is former President of the D.C. Thoracic Society and of the Metropolitan Washington Thoracic Surgeons; and is a former Governor of the American College of Surgeons.

A graduate of Johns Hopkins University and of its School of Medicine, Dr. Adkins received his specialty training at Johns Hopkins and George Washington University Hospitals. He also served as a captain in the U.S. Army Medical Corps for two years during which he was Chief of Surgery at an Army Hospital in Japan.

In 1961, the medical students at G. W. dedicated their yearbook to the professor whose "guidance will

(*Continued*)

serve as an inspiration in the years to come." They continued: "We consider it a great honor to have studied under Dr. Adkins, and we find it no wonder that he is held in such high esteem by his colleagues."

Dr. Adkins is a member of numerous professional societies including the American Association for Thoracic Surgery, American Surgical Association, American College of Surgeons, Halsted Society, the Society for Thoracic Surgeons, American Medical Association, and the American Association for Surgery of Trauma. He is also a member of the Washington and the American Heart Associations.

## MEETINGS

The American College of Surgeons will hold its final of three 1971 North American sectional meetings in Montreal, April 5–7. Approximately 600 registrants are expected to attend this 3-day program, open to all doctors of medicine. Headquarters Hotel is the Queen Elizabeth.

The Children's Hospital of the District of Columbia **Centennial Postgraduate Course in Pediatric Cardiology** will be held May 26, 27 and 28, 1971, in Washington, D. C. Participants will include Drs. Milton Markowitz, Catherine Neill, Richard Rowe, Richard Van Praagh, and local faculty. For information write Dr. Lewis P. Scott, III, Children's Hospital of D. C., 2125 13th Street, N. W., Washington, D. C. 20009.

## OBITUARIES

### M. Frances Ayres, M.D.
### (1920–1970)

Dr. M. Frances Ayres as assistant professor of pediatrics at Georgetown University Hospital died November 24, 1970 at Arlington Hospital. She lived at 722 Broad Street, Falls Church.

A native of Pittsburgh, she was a graduate of the University of Pittsburgh and received her medical degree in 1944 from the George Washington University. She interned at St. Elizabeths Hospital from 1944 to 1945 and served her residencies at Alexandria Hospital in 1945 and Children's Hospital from 1946 to 1947.

Dr. Ayres played an active role in setting up the Cerebral Palsy Center of Northern Virginia in Falls Church. Dr. Ayres was assistant director of clinical services with the Child Development Center at Georgetown University Hospital and was on the staff at Arlington and Fairfax Hospitals.

She was secretary of the Fairfax County Medical Society; she held the same post for the Northern Virginia Pediatric Society. She was a member of the Medical Society of the District of Columbia, the Virginia Pediatric Society, and the American Academy for Cerebral Palsy.

Dr. Ayres is survived by a son, Robert G. Muillenburg, of Falls Church; two daughters, Mrs. James R. Burdick, of Milledgeville, Ga., and Lynn Muillenburg, of Fredericksburg, Va., and a sister Mrs. H. B. Comstock, of Middleburg Heights, Ohio.

### Mary F. Watt, M.D.
### (1924–1970)

Dr. Mary F. Watt, director of the medical outpatient clinic at George Washington University Hospital died November 27, 1970 at the hospital. She lived at 3101 Hawthorne Street, N. W.

Dr. Watt was born in Rome, Italy. She attended Barnard College and received her medical degree from Johns Hopkins University in 1950. The following year she served her internship at George Washington University Hospital; she served her residencies at Gallinger Hospital from 1951–1952 and at Mt. Alto Veterans Hospital from 1952–1953 as well as 1955–1956.

She was a fellow in nephrology from 1956–1963. In 1963 she was named director of the outpatient clinic of George Washington University Hospital. Dr. Watt was an associate professor of medicine at George Washington University.

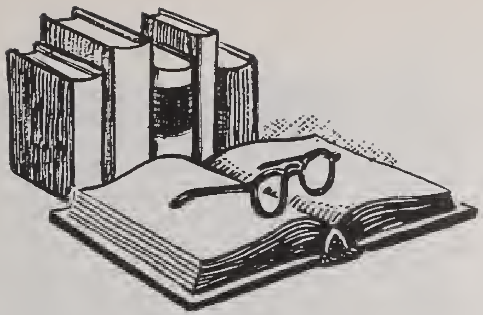
Dr. Watt is survived by her husband Dr. John Watt Jr. of the home address, and her mother Theodosia H. Falorsi also of Washington.

**NURSES REGISTRY**

LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**



# Book Reviews

**Healthful School Environment.** Charles C. Wilson, M. D., and Elizabeth Avery Wilson, Ph. D., editors. Price $6.00, $4.00 paper. Pp. 296. National Education Association and the American Medical Association.

It is a very educational experience for a pediatrician or any physician interested in children to read this volume. Very little of it has to deal with medical considerations but the scope of the book does give an indication of the enormous numbers of environmental factors which must be coördinated for the school age child. There are 14 chapters in this book ranging from the school administrator to considerations in waste disposal. A number of consultants have been relied upon to write the chapters and this is evident because of the overall excellence of the presentation. Clearly, a considerable amount of effort has gone into the preparation of each chapter. The number of references to medical standards is relatively small but what is mentioned certainly reflects current medical opinion. For example, it is mentioned very clearly that athletes ought not to be deprived of water or salt during training. The authors have also recognized that the routine use of strong disinfectants on floors is a useless procedure. In some respects the discussion of health topics is quite novel and of particular interest was the section which advised the teacher to use the occasional accident or ill health of a student as a focal point for discussion of health problems with the rest of the class. For example, when a child needs to go to a hospital for appendicitis there are many questions which need to be answered in the minds of his classmates. Unfortunately, the problem of a death of a classmate is not discussed and does present a major problem in schools where this occurs. The discussion of athletics and training is particularly pertinent to this time of increased injuries during sports activity. If the guide lines, as listed in chapter 12, were followed one would anticipate a marked decline in morbidity and mortality among student athletes.

This book is a reference work, a good planning document, but has little medical knowledge to offer for practicing physicians. However, it is worthwhile for physicians to become acquainted with the planning that must go into making a healthful school environment.

CHESTON M. BERLIN, M.D.

**Spectroscopic Approaches to Biomolecular Conformation.** Edited by D. W. Urry. Contributors: PETER G. DEBRUNNER, SUE HANLON, MICHAEL LASKOWSKI, JR., MASAKO OHNISHI, WILLIAM RHODES, DAN W. URRY, GREGORIO WEBER. Price, $15.00. Pp. 314. The American Medical Association, 1970.

This volume is concerned primarily with the research contribution of a small group of scientists.

The book is composed of 7 chapters on such titles as "The Use of Electronic Absorption Spectra in the Study of Environment of Chromophores in Proteins," "Fluorescence Methods in the Study of Protein Conformation," etc. A highly technical and theoretical consideration of the spectroscopic approaches to the determination of biomolecular conformation, this book will appeal to only a small group interested in the technical approaches to fundamental biological processes.

**Chemistry for Medical Technologists**, 3rd ed. WILMA L. WHITE, B.A., MARILYN M. ERICKSON, B.S., AND SUE C. STEVENS, B.A., M.A., Ph.D., F.A.I.C. Price, $15.00. Pp. 710, with 275 illustrations and 1 color plate. St. Louis: Mosby, 1970.

This book in its third edition is primarily directed toward methodology both manual and automated in Clinical Chemistry. Unfortunately, this is another cook book type of Laboratory text with a superficial explanation on a lot of subjects.

This book is slanted for students, and I believe would cause considerable confusion for this group. For example, the illustration of a swing type analytical balance and operating procedures serves no useful purpose for the modern Laboratory experienced with more sophisticated instrumentation. The appendix on Reagents is totally inadequate and would lead to considerable error if the printed instructions were followed. I would not recommend this book to student technologists.

VERNON E. MARTENS, M.D.

**Ophthalmology: Principles and Concepts.** Second Edition. FRANK W. NEWELL, M.D. Price, $15.50. Pp 527 with 233 illustrations. St. Louis: Mosby, 1969.

In general this is an excellent textbook for medical students. It also would, I believe, be a useful and enjoyable reference book for most general practitioners and internists.

*(Continued)*

The author's attempt to correlate clinical observations of the visual system with the basic facts from anatomy, embryology, biochemistry, optics and pharmacology has resulted in some skillful summarizations and simplifications. Few people could have done such a good job of including material from the most recent literature. The generous use of tables concisely summarizes facts which are adequately discussed in the following pages. The diagrams and drawings are mostly good. The black and white pictures made from photomicrographs are mostly fair. The pictures made from retinal photographs are mostly poor. With respect to grammatical correctness and the use of unambiguous, fact-filled sentences, this ophthalmology textbook is clearly superior to the others published in the United States. The glossary will be useful to any non-ophthalmologist. The list of selected references will be very helpful to any serious student.

The paper, printing, and binding are excellent. There are practically no typographical mistakes.

ROBERT P. KLING, M.D.

**MEETINGS, SEMINARS in refreshing country-estate atmosphere. Golf, tennis, lakes. Versatile new conference facilities for up to 250. Dining in historic Old Mill Room, new Tack Room (cocktails).**

*Write for Meetings Portfolio or call 703-296-2181.*

**THE BOAR'S HEAD INN**
Charlottesville, Virginia

**We located our offices just off Farragut Square to better serve the professional* and personal insurance needs of doctors.**

Employees Workmen's Compensation • Bonds on Employees • Equipment Floater • Fire Insurance Contents • Business Expense Disability • Non-Cancellable Disability Income • Auto and Home Insurance

**As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*

# THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA
# 1971

## OFFICERS

Marvin C. Korengold, *President*
Darrell C. Crain, *President-Elect*
James E. Boland, *First Vice President*
Warren D. Brill, *Second Vice President*
Mr. Thomas Sadler, *Secretary-Treasurer*

### Executive Board

Henry D. Ecker, *Chairman* (1971)
William S. McCune (1972)
Frank S. Bacon (1973)
Frank S. Pellegrini (1974)

### Ex Officiis

Marvin C. Korengold
Darrell C. Crain
James E. Boland
Warren D. Brill
John J. Hughes
C. Willard Camalier, Jr.
Mr. Thomas Sadler, *Secretary*

### Board of Credentials

Edward E. Ferguson, *Chairman* (1971)
Eugene A. Clark, *Vice Chairman* (1972)
Edwin P. Parker, III (1971)
Charles S. Ireland (1972)
William J. Jaffurs (1973)
Robert Langevin (1973)

### Delegates to American Medical Association

John J. Hughes (1971)
C. Willard Camalier, Jr. (1972)
Josephine E. Renshaw, *Alternate* (1971)
Raymond Scalettar, *Alternate* (1972)

**Legal Counsel:** John Lewis Smith, III

## STANDING COMMITTEES

### CONSTITUTION AND BY-LAWS

David Wherry, *Chairman*
Hugh Fulcher, *Vice Chairman*
William Ballinger
Bernard Flaherty
Donald Haut
C. Roger Kurtz
Robert Moran
Ramasamynatesan
Harry Zehner, Jr.

### GRIEVANCE

Wesley Oler, *Chairman*
Josephine E. Renshaw, *Vice Chairman*
Frederick Brandt
Karl Corley
Frank MacMurray
James McFarland
Leonard Peterson
Linwood Rayford
Stacy Rollins
Charles Sprunt
Myer H. Stolar
Ralph Whitley

### MEDICAL ETHICS AND PROFESSIONAL CONDUCT

Ernest Gould, *Chairman*
William Cooper, *Vice Chairman*
John Cavanagh
Neville Connolly
James Fitzgerald
Raymond Scalettar
Thomas Sappington

### CLASSIFICATION

Wallace M. Yater, *Chairman*

(Internal Medicine)

*Allergy:*
Ellis April
*Anesthesiology:*
Philip J. Lowenthal
*Arthritis & Rheumatic Disease:*
Myer H. Stolar
*Cardiology:*
Herbert L. Tanenbaum
*Clinical Oncology:*
Stanley A. Schwartz
*Dermatology and Syphilology:*
Raymond A. Osbourn
*Endocrinology:*
Samuel D. Loube
*Gastroenterology:*
George C. Buchanan
*General Practice:*
Samuel Diener
*Hematology:*
Edward Adelson
*Internal Medicine:*
Joseph J. Wallace
*Nephrology:*
Marshall Jacobson
*Neurology and Neurological Surgery:*
Hugo V. Rizzoli
*Obstetrics and Gynecology:*
John J. Kuhn
*Ophthalmology:*
Melvin G. Alper
*Orthopedics:*
George W. Hyatt
*Otolaryngology:*
Morris E. Krucoff
*Pathology and Laboratory Medicine:*
Paul B. Garcia
*Pediatrics:*
Allan B. Coleman
*Physical Medicine:*
Margaret M. Kenrick

*(Continued)*

*Plastic Surgery:*
Alfred J. Suraci
*Procatology:*
Robert S. Smith
*Psychiatry:*
Isadore Rodis
*Pulmonary Disease:*
Robert Langevin

*Radiology:*
David H. Rosenfeld
*Surgery:*
C. Edwin McNamara
*Thoracic Surgery:*
Paul C. Adkins
*Urology:*
Parker S. Dorman

## SPECIAL COMMITTEES

### AIR POLLUTION

Eloise Kailin, *Chairman*
Richard Feinberg, *Vice Chairman*
Sol Katz
Yuill Black
Harold Silver

### ALCOHOLISM

Anthony Zappala, *Chairman*
Howard Silby, *Vice Chairman*
Teofanes Carreno
Joseph Chambers
Horace Custis
Daniel Glick
Alfred Greenfield
Earl Mitchell
David Morowitz
John D. Schultz
Melvin Small
Lennox S. Westney

### ANNUAL SCIENTIFIC ASSEMBLY COMMITTEE

John Lynch, *General Chairman*
William Funderburk, *Scientific Exhibit Chairman*
Raymond Osbourn, *Commercial Exhibit Chairman*
Jay Shapiro, *Program Chairman*
Joseph Swift, *Assistant Program Chairman*

### AVIATION MEDICINE

Robert Poole, *Chairman*
James D. Brew, Jr., *Vice Chairman*
Robert Hecker
Kermit H. Hanson
Kenneth McCoy
Harry Rosenthal
Lawrence D. Summerfield
Mohammed F. Taleghani
John Weimer
Don Wenger

### BLOOD BANKS

Richard Kaufman, *Chairman*
Charles Rath, *Vice Chairman*
Eugene Chap
Grace H. Guin
Vincent Hernandez
Oscar Hunter, Jr.
William J. Jaffurs
Wallace Jensen
Vernon Martens
Kenneth McCoy
Paul McCurdy
S. Gerald Sandler
Evan Stone, Jr.

### CHILD WELFARE

Roland Scott, *Chairman*
Pearl Rosser, *Vice Chairman*
Cheston Berlin
Bette Catoe
Morris Chase
Bettie Clark
Walter Combs
A. R. Sarioglu
Harold Hobart
Margaret Nicholson
Frederick North
John F. O'Neill
Thomas Reichelderfer

### COMMUNICABLE DISEASE

James Curtin, *Chairman*
Robert Parrott, *Vice Chairman*
E. R. Fenton
Caro Luhrs
Andrew Margileth
Frederick Meyers
E. H. Markwood
Reza Mostaan
Helen Ossofsky
Harold Passes
John Pate
Thomas Reichelderfer
Alma Jane Speer
Philip Witorsch

### CONTINUING EDUCATION

Jay Shapiro, *Chairman*
Antonio C. DeLeon, Jr., *Vice Chairman*
William H. Barton
Richard Bohannon
P. J. Doyle
Leon Ferber
Ronald Fishman
Leslie French
Warren C. Johnson
Charles Jones
Paul Kiernan
William Matory
Paul McCurdy
Bernard Peacock
Louis Rittelmeyer
Michael Seremetis
Melvin Small
Herbert Tannenbaum
Charles Tartaglia

### EMERGENCY MEDICAL SERVICE

Harry Zehner, *Chairman*
William Matory, *Vice Chairman*
Maurice Casey
Robert L. Flynn
George W. Hyatt
E. C. Mazique
Anna Lux
Edwin C. Mitchell
Thomas Piemme
James P. Shaper
Thomas Shelton
B. G. Vlaukin
Don Wenger
Samuel Zola

## ENVIRONMENTAL HEALTH

Clifton Gruver, *Chairman*
Stuart Danovitch, *Vice Chairman*

Franklin Brayer
Halla Brown
W. Montague Cobb
Richard Feinberg
George Green
Hugh House
William A. Howard
Paul Jaquet
Eloise Kailin
Michael Lemp
William Lewis
Thomas McMahon
Herbert Moskovitz
Henry Palacios
Alvin Seltzer
John B. Webster

## FEE REVIEW

Leo Van Herpe, *Chairman*
Blair Webb, *Vice Chairman*

Nicholas Azzato
J. Gordon Bell
Jerome Canter
Richard V. Erkenbeck
William Ferguson
Herbert Goldbert
N. E. Gwozdz
Kermit Hanson
Charles Humphreys
Arthur Hustead
William R. Hyde
Morton Kaufman
William Lyons
Brantley P. Vitek

## HOUSE AND BUILDING FUND

Russell Tilley, *Chairman*
Milton Goldman, *Vice Chairman*

Christopher Bever
Arthur Lewis
Nicholas Smyth

## INTERDISCIPLINARY–ON DRUG DEPENDENCY

Donald Glew, *Chairman* (Medical Society of D. C.)
R. Peter Altman (Medical Society of D. C.)
Frank Caprio (Medical Society of D. C.)
John Chatel (Medical Society of D. C.)
Ashur C. Chavoor, D. D. S. (D. C. Dental Society)
Ranville Clark (Medical Society of D. C.)
Brant W. Ditmore (D. C. Osteopathic Society)
Captain Robert Dollard (Medtropolitan Police Department of D. C.)
Robert Dupont (Medical Society of D. C.)
Michael Durr (Medical Society of D. C.)
Richardo Galbis (Medical Society of D. C.)
Robert Gardner (Co-ordinator for Drug Abuse Programs in D. C.)
Frederic Geissel (D. C. Pharmaceutical Association)
Richard Kelly (Medical Society of D. C.)
R. A. McConnaughy (Medical Society of D. C.)
Ross McElroy (Medical Society of D. C.)
Donald McKnew (Medical Society of D. C.)
Thayer Mackenzie, M. D. (Washington Psychiatric Society)
Earl Mitchell (Medical Society of D. C.)
Allen Mondzac (Medical Society of D. C.)
Samuel Moskow, M. D. (D. C. Podiatry Association)
Raymond A. Osbourn (Medical Society of D. C.)
Frank Pappas (Regional Director, Bureau of Narcotics and Dangerous Drugs)
Merl Ryan (Director, Office of Legislative Governmental Services, F. D. A.)
John D. Schultz, M. D. (Associate Director of Mental Health, D. C. Health Department
Robert Stolar (Medical Society of D. C.)

## LEGISLATIVE

Paula Kaiser, *Chairman*
William Felts, *Vice Chairman*

Harvey Ammerman
J. Gordon Bell
Robert Butler
William Cooper
Howard A. Donald
William Felts
Herbert Giffin
Julius Hoffman
Oscar Hunter, Jr.
Oscar Legault
Agnes McNutt
James Shepperd
Joseph Wallace

## LIASON WITH ALLIED PROFESSIONS

Charles Duvall, *Chairman*
Marvin Fuchs, *Vice Chairman*

C. A. Caceres
Horace Custis
P. G. Doyle
Margaret Garrett
Roger Peele
Lawrence Putnam
Massims Righini
Evan Stone, Jr.
V. A. Ujhely
Louise Wensel
Norman L. Wilson

## LIASON WITH HOSPITALS

Norman Horwitz, *Chairman*
Louis Gillespie, *Vice Chairman*

Robert Day
Jerome Epstein
Francis C. Jackson
Charles Jones
Thomas Keliher
John Long
Joseph Swift
George Schreiner
George Vouvalis
Moe Weiss
Arthur West

## LIASON WITH MEDICAL SCHOOLS

William Funderburk, *Chairman*
James Fitzgerald, *Vice Chairman*

Gilbert Eisner
James Feffer
John Parks
Thomas Peery
Elbert Phelps
John Rose
George Schreiner
Michael Seremetis
Bruce Shnider

## MATERNAL WELFARE

Marvin P. Footer, *Chairman*
W. P. McKelway, *Vice Chairman*

Ridgley C. Bennett
Clair Cobb
Edmund Daley
Howard A. Donald
Harry Douglas
Julius Epstein
Eugene Finnegan
James Frawley
Aaron Gerber
Paul McCurdy
Melchior F. R. Savarese
Lennox S. Westney

### MEDICAL ASPECTS OF SPORTS

Richard Schwartz, *Chairman*
Stanford Lavine, *Vice Chairman*
Richard Bohannon
Thomas Calhoun
William Chin-Lee
Kenneth Cho
Charles F. Colao
Edmund Daley
Henry Horstman
William A. Howard
Arthur Hustead
Ivan Magal
Alfred Pavot
C. Andrew Rigg
John Sager
John C. Sullivan
Brantley P. Vitek

### MEDICAL BUREAU

Robert Langevin, *Chairman*
Antonia Candas, *Vice Chairman*
Basdeo Balkissoon
Bette Catoe
Charles Carroll
Adolph Friedman
L. M. Liverett
Agnes McNutt
Robert Sherman
Shelton Thomas

### MEDICINE AND RELIGION

Elizabeth Kahler, *Chairman*
Angelo D'Agostino, *Vice Chairman*
Maxwell Boverman
Alice Brigham
Thomas Calhoun
Robert Collins
Nicholas Ionedes
John Lynch
William Tunell
Elliot Wilner

*Representing Clergy by Invitation of Society*

Dr. Tibor Chikes, Professor of Pastoral Care, Wesley Theological Seminary
Dr. L. R. Ditzen, Director, National Presbyterian Center
Rev. Joseph A. Fletcher, Virginia Theological Episcopal Seminary
Rabbi Joshua Haberman, Washington Hebrew Center
Rev. Joseph O'Brien, St. Elizabeth's
Rev. Joseph A. Saches, Theological College
Rabbi Merle E. Singer, Temple Sinai
Canon Richard Williams, Mt. Moriah Baptist Church

### MEDICOLEGAL PROBLEMS

Harvey Ammerman, *Chairman*
Frank Miller, *Vice Chairman*
Alfred Baer
Louis Balla
Robert Barter
Samuel Becker
Ray Brown, Jr.
Alan Crain
Thomas Cullen
Samuel Diener
Harvey Gold
Allan Lee
Cornelius Murphy
David Nolan
Jed Pearson
Philip Philbin
Judson Randolph
Eleanor Short
J. Victor Simpson
Ernest Zimmerman

### MEMBERSHIP

Donald Haut, *Chairman*
Margaret Abernathy, *Vice Chairman*
Robert Carnathan
Ranville Clark
L. M. Liverett
Ali Moghtader
L. Edward Perraut
George Selby
Carlos Silva
John Sullivan
Joseph Swift

### MENTAL HEALTH COMMITTEE

Paul Chodoff, *Chairman*
Robert H. Groh, *Vice Chairman*
Ranville Clark
Arcangelo D'Amore
Margaret Garrett
Arthur Henderson
Warren Johnson
Edward Kirby
Morris Kleinerman
Zigmond Lebensohn
Anna Lux
Thayer Mackenzie
Roger Peele
John D. Schultz
Dorothy Starr
Norman Taub
Charles Troshinsky
Leon Yochelson

### OCCUPATIONAL HEALTH

Lomax Wells, *Chairman*
I. Phillips Frohman, *Chairman*
C. W. Brandt
Charles Epps
George Green
Hugh House
Charles Humphreys
Lewis Klein
Raymond A. Osborne
Phillip P. Pease
John B. Webster

### PHYSICAL PLACEMENT

Leo Schildhaus, *Chairman*
Arthur Anderson, *Vice Chairman*
Basdeo Balkissoon
John Griswold
Charles V. Pate
Alfred J. Suraci

### PUBLIC INFORMATION AND EDUCATION

John Keshishian, *Chairman*
Lewis Kurtz, *Vice Chairman*
Joseph Chapman, Jr.
Howard A. Donald
Leon Ferber
Marvin Footer
Michael Halberstam
Donald Haut
Stafford Hawken
Murdock Head
Peter Horvath
Samuel D. Loube
Philip Philbin
Joseph Pisani
Lois Platt
Stacy Rollins, Jr.
Nicholas Smyth
James Snyder
Myer H. Stolar
Richard Whelton

### PUBLIC WELFARE

Erman W. Edgecomb, *Chairman*
E. Herbert Bauersfield, *Vice Chairman*
Thomas Arnett
John Barrett
Robert Butler
Paul Cornely
Eugene Jobe
Lewis Klein
D. H. Kushner
E. C. Mazique
H. B. Richardson, Jr.
Louis Rittelmeyer, Jr.
James Sheppard
W. J. Strudwick
Stanley Talpers
Martin Thomas

### REGIONAL MEDICAL PROGRAM POLICY AND STEERING

Desmond S. O'Doherty, *Chairman*
William C. Ames
Lloyd B. Burk, Jr.
Bette Catoe
P. J. Doyle
Barton J. Gershen
C. Albert Hudson
John A. Kenney, Jr.
John Long
Marion Mann
Francis Mayle
Thomas Mattingly
Benjamin S. Miller
John Parks
John Rose
Raymond Standard
Arthur Wentz

### REHABILITATION

Margaret Kenrich, *Chairman*
Moe Weiss, *Vice Chairman*
William Argy
C. W. Brandt
Kenneth Cho
Claire Cobb
Alfred Pavot
Francis Wenger

### RELATIVE VALUE

Lewis Biben, *Chairman*
William J. Jaffurs, *Vice Chairman*
Robert Dietrich
William Feller
Claudine Gay
Kermit Hanson
Howard Katzman
Vernon Martens
Douglas Martz
Herbert McKnight

### RUFFIN AND OTHER BEQUEST FUNDS

Paul Wilner, *Chairman*
William Ballinger, *Vice Chairman*
William Funderburk
Claudine Gay
Carlos Silva

### SMOKING AND HEALTH

Paul G. Rhodes, *Chairman*
Sol Katz, *Vice Chairman*
E. R. Fenton
Bernard Grand
Oscar Legault
Ivan Magal
Stanley Schwartz
Paul Snow
Mohammed F. Taleghani
George Ware
Lennox S. Westney

### SOCIETY NEWSLETTER

Irving Burka, *Editor*

### SOCIETY INSURANCE

Eugene Lipow, *Chairman*
Louis Balla, *Vice Chairman*
Thomas Arnett
Antonio Canadas
Harry Douglas
Juan R. Fraga
Bagden Mangasarian
Frederick Meyers
Norman Paul
John Sager

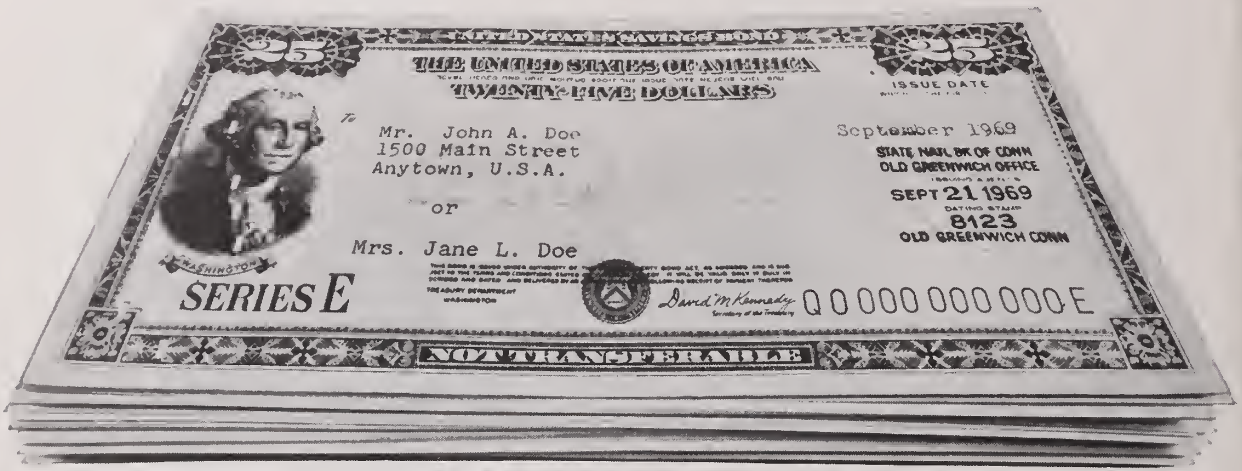
### TRAFFIC

Herbert Gates, *Chairman*
Samuel Bullock, *Vice Chairman*
Francis Blackwell
Maurice Casey
Kenneth Cho
Wolfram Forster
William Kurstin
Thayer Mackenzie
G. Victor Simpson
Dorothy Starr
Elliot Wilner

### UTILIZATION

Edwin P. Parker, *Chairman*
James Foster, *Vice Chairman*
Frank Bacon
Henry Bell
Ernest Bremer
Alan Crain
Albert Diaz
William Feller
Robert Havell
R. Frank Jones
Douglas Martz
Frederick Meyers
Roger Peele
John W. Price
Raymond Scalettar
Paul Schlein

# Now all your U.S. Savings Bonds pay higher interest.



UNITED STATES SAVINGS BOND

THE UNITED STATES OF AMERICA

TWENTY-FIVE DOLLARS

ISSUE DATE

To
Mr. John A. Doe
1500 Main Street
Anytown, U.S.A.
or
Mrs. Jane L. Doe

September 1969

STATE NATL BK OF CONN
OLD GREENWICH OFFICE
SEPT 21 1969
8123
OLD GREENWICH CONN

SERIES E

David M Kennedy

Q00000000000E

NOT TRANSFERABLE

Now it's official.

Now one of the safest investments in the world brings you new and higher returns.

Now your U.S. Savings Bonds pay the highest interest in history: a full 5 per cent when held to maturity of 5 years and 10 months. (4% the first year; 5.20% thereafter to maturity). Previously, these bonds earned you only 4¼% if you held them for seven years.

The new interest began June 1, 1969. So all of the bonds you own, no matter when you bought them, have been collecting higher interest since that time.

Those bonds are still replaced if lost, stolen or burned.

You can still buy them through the payroll savings or a bond-a-month plan.

Regardless of your other investments, can you think of any easier, better, or safer way to build a nest egg for yourself?

It's nice to know that you are doing a little something for Uncle Sam, too. The $52 billion in U.S. Savings Bonds now outstanding in the hands of millions of Americans go a long way toward keeping your country financially strong.

There never was a better time to take stock in America.

There's a man at the place where you work who can start you on the Payroll Savings Plan right now.

UNITED STATES ★ SAVINGS BONDS ★

Bonds are safe. If lost, stolen, or destroyed, we replace them. When needed, they can be cashed at your bank. Tax may be deferred until redemption. And always remember, Bonds are a proud way to save.

## Take stock in America.

**With higher paying U.S. Savings Bonds.**

# Reports Presented at Annual Business Meeting

## November 18, 1970

## Report of the Chairman of the Executive Board

In reviewing this year's activities, it distresses me to note that 2 members were suspended from membership and ultimately expelled from the Society for falsifying their credentials. Also, 2 members were requested to appear before the Utilization Committee for explanations concerning charges to Medicaid patients. Of great consolation and encouragement, however, is the firm knowledge that we are fully and thoroughly "policing our own." It is vital to our Society that we keep our house in order. Perhaps more than any other profession, ours is the target of ill-founded criticism and attack from many quarters. We must continuously be alert to these perils and do all within our power to stem the tide of this shore-eroding current. We must tolerate no breach of the Principles of Medical Ethics by any member. Only in this manner can we safeguard the public and the medical profession against those very few who might be deficient in moral character or professional competence. It is our duty, as prescribed by the Principles of Medical Ethics, to unhesitatingly divest ourselves of those members who indulge in illegal or unethical conduct. It is our obligation and our duty to delve deeply into the suspect activities of any members. To do less would be tantamount to silent approbation.

### Environmental Health Committee

With great competence, Dr. Clifton Gruver and his Committee on Environmental Health focused its attention to the problems of air pollution, water pollution, noise pollution, and other environmental health hazards (including radiation, toxins, pest control, etc.). Foremost among the latter was intensified activity in the area of plumbism. Underway at the moment is an educational program on the salient features of lead poisoning.

### Legislation

Our Society has figured prominently on the legislative scene. Through the efforts of Dr. Vernon Martens and members of his Committee on Blood Banks, we successfully introduced and had enacted into law legislation to authorize the transfer of unlicensed blood components by licensed blood banks in the District of Columbia. Prior to enactment of this law, under the terms of the Public Health Service Act of 1902, unlicensed blood products could not be transported between states or between institutions in the District.

Dr. C. Willard Camalier, Jr., our Senior Delegate to the AMA, testified before the United States Senate, representing the Medical Society, in support of the District of Columbia Anatomical Gift Act. Patterned after the Uniform State Laws, the new law is comprehensive and concise, with excellent coverage of the situation as it exists today in the utilization of human bodies and parts thereof, particularly the field of organ transplants.

It has become increasingly apparent that legislation is needed to further facilitate the functioning of Review and Utilization Committees covering hospital and other medical facilities. When detailed study is required to determine the adequacy of treatment and proper use of facilities in the interest of both patient and public, those concerned and involved in the review or research must be protected to insure free access to all pertinent information without fear or reprisal. Accordingly, our Legislative Committee prepared for Executive Board approval the Medical Records Act. We are now hopeful that this proposed legislation will be introduced and enacted into law.

Dr. Herbert Giffin, with Dr. Seymour Alpert and others, testified in support of a Bill to provide support for health manpower needs in the medical and dental educational programs in local non-profit schools.

Dr. Samuel Diener continued his zealous efforts in connection with modifying the antiquated zoning regulations. But the wheels grind slowly, and we still await final outcome on this. Pending also: Congressional action on the proposed amendment to the Healing Arts Practice Act; processing of the D. C. Corporate Practice Act which the Society will support only if the Bill allows for continuation of the present exemption from the unincorporated business tax.

### Committee on Occupational Health

Under the guidance of Dr. Raymond Osbourn, this Committee had two major projects during the year. The Executive Board accepted the Committee's recommendation for the establishment of a fee schedule guide for the treatment of compensation cases in the District of Columbia. This fee schedule, based on the Society's Relative Value Scale, serves as a guide in the compensation cases, there is no rigidity of "fee fixing."

The second major project of the Occupational Health Committee was in the area of food handlers in D. C. Upon its investigation, the Committee learned that health regulations and examination standards for food handlers had fallen into disuse in the District. Accordingly, the Committee evolved food handlers standards of examination. Submitted to and approved by the Executive Board, these proposed standards will be put into formal language and forwarded to the appropriate Committee of Congress with the request for enactment of legislation.

### Smoking and Health Committee

Special mention must be made of Dr. John Keshishian who with the Committee on Smoking and Health waged a vigorous campaign against smoking as a health hazard. Dr. Keshishian's campaign resulted in country-wide publicity. As AMA's *P R Doctor* said ". . . it was one of the most concentrated anti-cigarette drives ever undertaken. . ." Dr. Keshishian was also instrumental in the introduction of legislation restricting smoking aboard aircraft.

### Traffic Committee

Singularily unheralded but of paramount importance to this community is our Traffic Committee, chaired for many years by Dr. Herbert Gates. This Committee continues unabated its excellent work in cooperating with the D. C. Department of Motor Vehicles in evaluating the medical aspects of individual driver licensure.

### The Woman's Auxiliary

At our Annual Business Meeting on November 18, the President of the Auxiliary, Mrs. Charles Pate, will present a review of the Auxiliary's year. Prior to Mrs. Pate's presentation I should like to go on formal record with a compliment and a congratulatory note for some very fine accomplishments: Successful launching of the Block Mother Plan; their involvement in many areas of community activities; contributions to AMA/ERF; and their invaluable assistance in carrying out the Scientific Assembly. In these and other areas, our Woman's Auxiliary has shone. Thank you, to all.

### Constitution and By-laws Amendment To Provide for Medical Student Membership

At last year's Annual Business Meeting there was considerable discussion regarding medical students and their participation in the Medical Society. Resulting from this discussion was a resolution, which was carried, that the Executive Board implement the involvement of medical students in the affairs of the Society.

The Executive Board then appointed an Ad Hoc Committee to meet with SAMA representatives to explore the role of medical students in the Medical Society. This Committee submitted a report to the Executive Board incorporating suggestions and recommendations that resulted from the meeting with SAMA representatives.

Presented now for vote by the membership are the following amendments to the Constitution and Bylaws Committee and approved by the Executive Board, allow for the involvement of medical students in the functioning of the Society:

Chapter II is amended to read as follows:

Article I. The members of the Society shall be of seven classes, Active, Life, Special, Associate, Honorary, Intern-Resident and Student. Requests for a change in the membership classification shall be referred to the Board of Credentials. The Board of Credentials shall establish its own procedure for processing such requests.

Articles II, III, IV, V, VI, VII—No Change Proposed.

Article VIII. Student membership shall be limited to full time students in good standing at one of the accredited medical schools in the District of Columbia. Such members shall have the privilege of attending all scientific sessions of the Society and shall receive its newsletter and notices of its scientific meetings. They shall not hold office. Three members designated by their Council may attend the business meetings of the Society, may participate in the discussion but may not vote. One student member may be appointed to each of the Society's committees except those designated by the Executive Board as "housekeeping" committees. Such committee members shall have the right of discussion and vote.

Article VIII in present By-Laws becomes Article IX without any change.

Chapter IV is amended as follows:

Article I, Add Section 6. Student members shall pay dues of two dollars ($2.00) annually.

### Proposed New Sections

As set forth in our Constitution and By-Laws, Chapter X, Article I, members may organize Sections composed of any specialty group recognized by the Classification Committee. The Executive Board has given approval to the tentative establishment of the following new Sections and recommends to the membership that these Sections be permanently established and that Chapter X, Article II of the Constitution and By-Laws be amended to include them in the roster of recognized and established Sections:

Arthritis and Rheumatic Disease
Cardiology
Clinical Oncology
Endocrinology
Gastroenterology (reactivated)
Hematology
Nephrology
Pulmonary Disease

The Executive Board has reviewed the By-Laws on each proposed Section as well as the roster of officers. These are on file at the Society headquarters.

### Election Procedures

Amend Chapter VI, Article IV, Paragraph 2, which now reads:

"Ballots, on which appear the names of twenty-one Active, Life and Special members representative of various sections and medical institutions in the District, chosen by the President of the Society, and confirmed by the Executive Board, shall be sent to all Active and Life members. Members shall be instructed to vote for not more than seven of the twenty-one members, otherwise their ballots will be void. The seven members receiving the highest number of votes will be declared members of the Nominating Committee."

Sentence one is hereby amended to read:

"Ballots, on which appear the names of twenty-one Active, Life and Special members representative of various sections and medical institutions in the District, chosen by the President of the Society, and confirmed by the Executive Board, shall be sent to all Active, Life and Special members."

Paragraph 2 is hereby further amended by adding the following at the end of the paragraph:

"The immediate Past President of the Society shall be Chairman without vote except in the case of a tie. Should he be unable to serve, the next Past President in inverse order of his election shall take his place."

Amend Chapter VI, Article IV, Paragraphs 3 and 4 which now read:

"Ballots shall be mailed to all Active and Life members on or before October 1 and returned not later than October 15. Envelopes in which ballots are delivered to the Society's offices shall bear the following legend in the lower left hand corner: "Nominating Committee." They may not be opened, except in the presence of two or more tellers appointed by the President.

The names of nominees for office shall be presented at the annual business meeting by the Chairman of the Nominating Committee. The Committee shall present one or more candidates for each office. A list of the nominees shall be sent to the membership with the notice of the meeting at which nominations will be presented. Additional nominations may be made from the floor" are hereby repealed and the following substituted:

"Ballots shall be mailed to all Active, Life and Special members not later than July 15th and must be returned not later than August 15th. Envelopes in which ballots are delivered to the Society's offices shall bear the following legend in the lower left hand corner: "Nominating Committee." Ballots shall be kept under lock and key by the Executive Director until September 1st, and may not be opened except in the presence of two or more tellers appointed by the President.

The Nominating Committee shall present one or more candidates for each office. A list of nominees shall be sent to the membership with the notice of the annual business meeting before October 1st.

Further nominations for any office may be made in writing by any Active, Life or Special member when supported by the signatures of thirty Active, Life or Special members. Such nominating petitions must be accompanied by a typed list of those signing. These nominations must be in the hands of the Executive Secretary by October 15th.

Addition nominations may be made from the floor."

The Executive Board recommends approval of the above, with the deletion of the last paragraph.

### Annual Business Meeting Data

Amend Chapter III, Article I, Section I, Paragraph 2 which now reads:

"The Annual Business Meeting of the Society shall be held in the fall of each year and shall be devoted to the reception of annual reports and such other business as is specified on the Agenda"

shall hereby be amended to read:

"The Annual Business Meeting of the Society shall be held in November of each year and shall be devoted to the reception of annual reports and such other business as is specified on the Agenda."

### Nominations to Board of Trustees of Medical Service of D. C. and Group Hospitalization

Amend Chapter VI, Article IV, Paragraph 4 is hereby amended after the words

". . . one or more candidates for each office"

and the following added:

". . . and, in addition, nominees to fill vacancies on the Board of Trustees of Group Hospitalization, Inc. and the Board of Trustees of Medical Service."

### Nominations of the Health Foundation

The Health Foundation's By-Laws stipulate that Board of Directors (eleven) by named by the Medical Society. The Board must include the Society's President, President-Elect, Secretary-Treasurer, three other members of the Society and five additional members including a dentist, a pharmacist, and a registered nurse. It is recommended that the following be approved as members of the Health Foundation's Board of Directors for one year beginning January 1, 1971.

Marvin C. Korengold, M. D. (Society President, 1971)
Society President-Elect, 1971 (to be voted into office at the Annual Business Meeting)
Thomas Sadler (Society Secretary-Treasurer)
Edward W. Nicklas, M. D.
Roland Scott, M. D.
Lomas Wells, M. D.
Wilfred Dudley, D. D. S.
John R. McHugh, Pharmacist
Grace Mathews, R. N.
Renah Camalier
Jane Yates

### Nominations to Medical Service of D. C. Board of Trustees

Each year the President, with approval of the Executive Board, makes nominations for the Board of Trustees of Medical Service of D. C. The terms of two Society members (Russell M. Tilley, Jr. and Howard A. Donald) expire in the Spring of 1971. It is, therefore, recommended:

1. That Russell M. Tilley, Jr. be renominated.
2. That Howard A. Donald be renominated.

These nominations, if approved at our Annual Business Meeting, will be voted on at the Annual Business Meeting of Medical Service of D. C., in the Spring of 1971.

Other Society representatives are Dr. Charles E. Bickham, Jr., Dr. John A. Kenny, Jr., Dr. Jack Kleh, Dr. Edward W. Nicklas and Dr. Philip H. Philbin.

### Nominations of Group Hospitalization, Inc. Board of Trustees

Each year the President, with the approval of the Executive Board, nominates a representative to fill the vacancy of the member whose term expires in the Spring of the following year. The term of Dr. Brooks Brown expires in the Spring of 1971.

It is, therefore, recommended that Dr. Brooks Brown be renominated.

This nomination becomes final if approved at our Annual Business Meeting. Other Society representatives are Dr. W. Leroy Dunn, Dr. Karl C. Corley, Dr. Hilbert Sabin, and Dr. Josephine Renshaw.

### Report of the Board of Credentials

Since the last Annual Business Meeting, November 19, 1969, this Board has interviewed 136 applicants for membership. Again in the past year the preponderance of new members were in the specialties, a considerable number were born abroad, having had college and medical school education at home and much of their post graduate training in the United States. The professional qualifications and caliber of our applicants during the past year have remained of the highest degree.

Membership figures now show 1,642 Active, 148 Life, 29 Special, 707 Associate, 39 Resident-Intern, 36 Honorary, or a total of 2,596. Following are the comparative membership figures for 1961 through 1970:

| *Year* | *Active Members* | *Total Members* |
|---|---|---|
| 1970 | 1,642 | 2,596 |
| 1969 | 1,651 | 2,513 |
| 1968 | 1,640 | 2,497 |
| 1967 | 1,595 | 2,440 |
| 1966 | 1,555 | 2,444 |
| 1965 | 1,518 | 2,421 |
| 1964 | 1,535 | 2,313 |
| 1963 | 1,532 | 2,275 |
| 1962 | 1,505 | 2,260 |
| 1961 | 1,485 | 2,233 |

Edward E. Gerguson, M. D., Chairman
Eugene Clark, M. D., Vice-Chairman
E. Edwin McNamara, M. D.
William J. Jaffurs, M. D.
Charles S. Ireland, M. D.

### Report of the Secretary-Treasurer

This is my third and final report as Executive Secretary of your Medical Society. I want to express my gratitude to those members who during my brief tenure offered and gave their support and assistance to me. To the Chairmen of the Board—Dr. Edward Niclas, Dr. Paul Wilner and Dr. Robert Coffey—and to the Presidents—Dr. William McCune, Dr. Frank S. Bacon and Dr. Frank S. Pellegrini—I extend my appreciation for your guidance and counseling. This will not be forgotten.

I leave behind me a loyal, hard working office staff. These staff members are workers mornings, afternoons and many evenings. There is no time to be frittered away, and this they know. To me they are the hub of the Society wheel, and I congratulate you, the members, on the caliber of the employees in your Society headquarters. I will not cite these employees by name for my statements are all-inclusive. I feel compelled, however, to mention Lucille Smith on the eve of her departure. She is a multi-talented young lady, with a rare zest and enthusiasm for her work. She did it the hard way, working up from the ranks. In her eight years with the Society, she has worked in just about every area—what better way to learn an organization? When Lucille was selected to be Assistant Executive Director, there were rumblings in some quarters. By dint of her professionalism, Lucille has proved that the wisest possible choice was made when she was appointed to this position. With unswerving skill and something approaching dedication, she personally has steered to success the past three Scientific Assemblies, with her handling of the thousands of details and behind-the-scenes activities. Her departure from the Society on December 31, 1970 will be a tremendous loss. What a winner her new employer will be!

The selection of a successor to Lucille as Assistant Executive Director will be the responsibility of the new Executive Director. I sincerely hope that he will have the good fortune to find a good candidate of Lucille's ilk.

In all phase of operation of the Medical Society, my very best wishes to the new Executive Director for a long and successful career.

The serenity of the Medical Bureau functions remained unchanged—it fluctuates. We experience good long periods of time with very few complaints and relatively little operator turnover. Then suddenly we have an upsurge of complaints and a rash of resignations of operators. There is no connection between the two. We shall continue trying to give superior service to all Bureau subscribers and their patients. If you have any suggestions or recommendations regarding Bureau service we will welcome them.

The Bureau is currently undergoing an intensive investigation of its service and operation, with resulting major reorganization. All phases of the Bureau's 24-hour operation are being thoroughly examined. The final result of this intensive campaign will be to provide subscribers with superior service on a continuous basis. Let us know where we fail—let us know where we succeed.

In an effort to bring about financial stability to the Medical Annals, several changes have been made: the method of printing the Journal has been changed to a new composition system; engraving is being handled by the Journal's printer rather than by local contract; and the Journal is now being sent out in a "self-mailer." It is estimated that these changes will save us approximately $9,500 yearly. To offset the potential loss of any income from national advertisers, we are intensifying our efforts to bring in more local advertisers. These changes should do much to remove Medical Annals from the in-the-red category.

More than 600 meetings will have been held at the Society headquarters by the year's end. The record pace set in 1969 will be equaled and possibly surpassed. The Society's Committee meetings constitute the bulk of the meetings. This is not surprising in view of the fact that we have 42 Committees.

**KEOGH RETIREMENT PLANS**
Funded with Your Choice from a Wide Selection of Mutual Funds
Continuing Annual Service, Including Preparation of Tax Form 2950 SE

**EUGENE F. ROESSER, C. L. U.**
*Financial Services for Physicians*

1130 Seventeenth Street, N.W.
Washington, D. C. 20036
District 7-1114

# 1971 Proposed Budget

## (General Fund)

| | | |
|---|---|---|
| I. GENERAL FUND INCOME | | |
| A. *Dues* | | |
| 1. Active | $137,315.00 | |
| 2. Associate | 20,880.00 | |
| 3. Resident-Interns | 175.00 | $158,370.00 |
| B. *Other Income* | | |
| 1. Assembly | $22,000.00 | |
| 2. Interest on Savings | 6,275.00 | |
| 3. Indirect Cost-MWRMP | 55,000.00 | |
| 4. Miscellaneous | 1,500.00 | $84,775.00 |
| TOTAL GENERAL FUND INCOME | | $243,145.00 |
| II. GENERAL FUND EXPENSES | | |
| A. *Society Programs* | | |
| 1. Medical Annals Subsidy | $15,000.00 | |
| 2. Scientific Assembly | 26,400.00 | |
| 3. Committee Activity | 1,500.00 | |
| 4. Out of Town Meeting | 4,500.00 | |
| 5. Public Relations | 6,500.00 | |
| 6. Dues to Organizations | 1,000.00 | |
| 7. Awards and Grants | 500.00 | |
| 8. Membership Luncheon | 3,000.00 | |
| 9. Committee Luncheon | 4,500.00 | |
| 10. Publications | 800.00 | |
| 11. News Letter | 4,500.00 | |
| 12. Special Projects | 1,500.00 | |
| 13. Meeting Room Space | 1,700.00 | $71,400.00 |
| B. *General Administrative* | | |
| 1. Salaries | $89,000.00 | |
| 2. Legal Counsel and Audit | 7,000.00 | |
| 3. Retirement, Insurance and Taxes | 6,500.00 | |
| 4. Secretary and Staffing | 1,000.00 | |
| 5. Postage, Supplies | 14,000.00 | |
| 6. Telephone and Telegraph | 3,400.00 | |
| 7. Office Space | 32,600.00 | |
| 8. General Insurance | 800.00 | $154,300.00 |
| TOTAL GENERAL FUND EXPENSES | | $225,700.00 |
| TOTAL GENERAL FUND INCOME | | 243,145.00 |
| EXCESS INCOME OVER EXPENSES | | $17,445.00 |
| III. REIMBURSABLES-INCOME | | |
| A. Cancer Morbidity Review | $10,348.00 | |
| B. AMA and other Dues | 124,000.00 | |
| C. Blue Cross and Blue Shield | 405,000.00 | |
| D. Members and Agency Service | 12,600.00 | $551,948.00 |
| IV. REIMBURSABLES-EXPENSES | | |
| A. Cancer Morbidity Review | $10,348.00 | |
| B. AMA and Other Dues | 124,000.00 | |
| C. Blue Cross and Blue Shield | 405,000.00 | |
| D. Members and Agency Service | 8,250.00 | |
| TOTAL REIMBURSABLE EXPENSES | | $547,598.00 |
| TOTAL REIMBURSABLE INCOME | | $551,948.00 |
| EXCESS INCOME OVER EXPENSES | | $4,350.00 |
| V. MEDICAL ANNALS | | |
| A. *Income* | | |
| 1. Advertising and Subscriptions | $36,000.00 | |
| 2. Subsidy from General Fund | 15,000.00 | |
| 3. Miscellaneous | 750.00 | $51,750.00 |

| | | |
|---|---|---|
| B. *Expenses* | | |
| 1. Salaries and Honorarium | $15,600.00 | |
| 2. Retirement, Insurance and Taxes | 1,015.00 | |
| 3. Printing and Engraving | 38,800.00 | |
| 4. Supplies and Postage | 1,000.00 | |
| 5. Telephone | 800.00 | |
| 6. Space-Contra | 1,800.00 | |
| 7. Miscellaneous | 500.00 | |
| TOTAL MEDICAL ANNALS EXPENSES | | $59,515.00 |
| TOTAL MEDICAL ANNALS INCOME | | $51,750.00 |
| EXCESS INCOME OVER EXPENSES | | $(7,765.00) |
| VI. MEDICAL BUREAU | | |
| A. *Income* | | |
| 1. Alternate Listing Service | $59,135.00 | |
| 2. Telephone Secretarial Service | 182,065.00 | |
| GROSS INCOME | | $241,200.00 |
| B. *Expenses* | | |
| 1. Administrative Salaries | $8,000.00 | |
| 2. Operators Salaries | 172,000.00 | |
| 3. Retirement, Insurance & Taxes | 14,400.00 | |
| 4. Telephone and Directory | 27,500.00 | |
| 5. Supplies and Postage | 1,000.00 | |
| 6. Bureau Space | 8,900.00 | |
| 7. Billing Service | 1,700.00 | |
| 8. Miscellaneous | 300.00 | |
| TOTAL EXPENSES | | $233,800.00 |
| NET INCOME OR LOSS | | $7,400.00 |
| VII. BUILDING FUND | | |
| A. *Income* | | |
| 1. Office Space: | | |
| a. General Society | $36,100.00 | |
| b. Medical Bureau | 8,900.00 | |
| c. Leased | 29,682.00 | |
| d. Meeting Room Rentals | 4,300.00 | |
| 2. Interest and Dividends | 3,000.00 | |
| 3. Other | 1,170.00 | |
| TOTAL INCOME | | $83,152.00 |
| B. *Expenses* | | |
| 1. Salaries | $9,000.00 | |
| 2. Payroll Taxes | 465.00 | |
| 3. Hospitalization | 174.00 | |
| 4. Interest | 11,282.00 | |
| 5. Mortgage Principal | 25,000.00 | |
| 6. Janitorial Services | 10,680.00 | |
| 7. Supplies | 1,000.00 | |
| 8. Maintenance | 3,825.00 | |
| 9. Guard Services | 2,400.00 | |
| 10. General Insurance | 2,200.00 | |
| 11. Electricity | 12,810.00 | |
| 12. Gas-Heat | 3,552.00 | |
| 13. Water | 200.00 | |
| 14. Miscellaneous | 50.00 | |
| TOTAL EXPENSES | | $82,638.00 |
| NET INCOME OR LOSS | | $514.00 |
| VIII. SUMMARY | | |
| A. *Income:* | | |
| 1. General Fund | $1,088,043.00 | |
| 2. Building Fund | 83,152.00 | |
| TOTAL INCOME | | $1,171,195.00 |
| B. *Expenses:* | | |
| 1. General Fund | $1,066,613.00 | |
| 2. Building Fund | 82,638.00 | |
| TOTAL EXPENSES | | $1,149,251.00 |
| NET INCOME-ALL FUNCTIONS | | $21,944.00 |

## Report of the Nominating Committee

Dr. Paul R. Wilner, Chairman of the Nominating Committee, the members of which are selected by mail vote from a slate of 21, presented the following slate of officers for 1971:

*President-Elect:* Darrell C. Crain
*1st Vice-President:* James E. Boland
*2nd Vice-President:* Warren Brill
*Member, Executive Board, for a 4-year term:* Frank S. Pellegrini
*Member, Board of Credentials, for a 3-year term:* William Jaffurs
*Member, Board of Credentials, for a 3-year term:* Robert Langevin
*Delegate to AMA, for a 2-year term:* C. Willard Camalier, Jr.
*Alternate Delegate to AMA, for a 2-year term:* Raymond Scalettar

These nominees were submitted on behalf of the entire Nominating Committee, which included, in addition to the Chairman, Drs. Claudine Gay, Arthur Hustead, Raymond Osbourn, Louis Gillespie, Robert Moran, Jr., and James R. Synder.

## In Memoriam to Deceased Members 1970

Aschenbach, Ernest H. (Active)—October 16, 1969
Bayne-Jones, Stanhope (Life)—February 2, 1970
Beelar, Virginia (Active)—June 6, 1970
Borden, Daniel L. (Life)—December 10, 1969
Cassels, Keith (Active)—January 5, 1970
Corcoran, James (Active)—July 19, 1970
Cushing, Edward H. (Life)—November 15, 1969
Damian, Julius D. (Active)—August 13, 1969
Davis, Edgar (Life)—July 17, 1970
Dean, Benjamin (Life)—August 8, 1970
Detwiler, William (Active)—May 16, 1970
Fazekas, Joseph F. (Active)—October 17, 1969
Giles, Julian (Active)—April 29, 1969
Gladden, J. Robert (Active)—December 8, 1969
Greaneg, William (Life)—February 27, 1970
Darper, Donald (Life)—August 18, 1970
Heath, Frederick (Special)—February 24, 1970
Huffman, George R. (Life)—June 10, 1970
Jones, LeRoy (Active)—March 21, 1970
Johnson, Delbert (Active)—March 23, 1970
Karsner, Howard (Honorary)—April 8, 1970
Katzman, Sollie (Active)—November 10, 1969
Keene, Jesse (Life)—January 18, 1970
Madden, Leland (Life)—February 15, 1970
Margetti, Andrew (Honorary)—June 24, 1970
Mattingly, Richard (Special)—February 16, 1970
Murphy, John C. (Active)—March 1, 1970
Protas, Maurice (Life)—January 14, 1970
Richardson, Francis (Associate)—January 20, 1970
Rollings, Irving (Active)—October 26, 1969
Rush, Robert C. (Active)—December 23, 1969
Synder, Howard (Honorary)—September 22, 1970
Strawbridge, Francis (Active)—September 18, 1970
Vogg, J. William (Active)—July 18, 1970
Waters, William (Active)—July 15, 1970
Zehner, Harry, Sr. (Life)—November 24, 1969

MAXWELL
AND
TENNYSON
INC.
*PHARMACISTS*

*"Where Pharmacy is a Profession"*

Washington, D. C.

1801 Eye Street NAtional 8-0206
1835 Eye Street STerling 3-0360
916-19th Street, N.W. 223-9797

*Prescriptions called for and delivered without extra charge*

Biologicals–Vaccines
Serums
Hypo-Allergenic Cosmetics

DataMedics

The result is
total management control
& increased cash flow

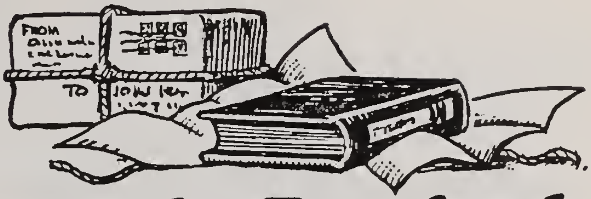
DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:
Billing
Bookkeeping
Collecting delinquent accounts
Designing offices
Leasing equipment
Preparing insurance claim data
Preparing payroll tax data
Recruiting personnel
Training personnel

How?
Consultation by appointment.

DM

DataMedics, Inc.
National Headquarters
7979 Old Georgetown Road
Washington, D.C. 20014
(301) 654-7666
Cable/Medic
Baltimore (301) 792-4424



# Books Received

The Clinical Recognition of Congenital Heart Disease. JOSEPH K. PERLOFF, M.D. Price $25.00. Pp. 606, with 578 illustrations. Philadelphia: Saunders, 1970.

Congenital and Pediatric Glaucomas. ROBERT N. SHAFFER, M.D., F.A.C.S., and DANIEL I. WEISS, M.D. Price $20.50. Pp. 221, with 253 illustrations. St. Louis: Mosby, 1970.

Current Dermatologic Management. STUART MADDIN, M.D. with TERENCE H. BROWN, B.S.P., M.S., PH.D., drug consultant. Price $38.75. Pp. 330, with 116 illustrations. St. Louis: Mosby, 1970.

Ocular Pharmacology, 2nd edition. WILLIAM H. HAVENER, M.D. Price $29.50. Pp. 556, with 304 illustrations. St. Louis: Mosby, 1970.

Synopsis of Anatomy. LIBERATO J. A. DIDIO, M.D., Ph.D. Price $17.75. Pp. 530, with 388 illustrations. St. Louis: Mosby, 1970.

The Immunology of Malignant Disease. JULES E. HARRIS, M.D., F.R.C.P.(C.), F.A.C.P. and JOSEPH G. SINKOVICS, M.D., F.A.C.P. Price $15.00. Pp. 251, illustrated. St. Louis: Mosby, 1970.

Hernia Repair without Disability. IRVING L. LICHTENSTEIN, M.D., F.A.C.S. Price $26.50. Pp. 210 with 113 illustrations. St. Louis: Mosby, 1970.

Essentials of Clinical Endocrinology. NORMAN G. SCHNEEBERG, M.D. Price $22.50. Pp. 449, with 210 illustrations. St. Louis: Mosby, 1970.

The Early Orthopaedic Surgeons of America. ALFRED RIVES SHANDS, JR., M.D. Price $15.00. Pp. 183 with 156 illustrations. St. Louis: Mosby, 1970.

Chemistry for Medical Technologists. WILMA WHITE, B.A., MARILYN ERICKSON, B.A., and SUE STEVENS, PH.D. Price $15.00. Pp. 710 with 275 illustrations. St. Louis: Mosby, 1970.

Synopsis of Pharmacology, 2nd edition. V. C. SUTHERLAND, PH.D. Price $10.75, paper. Pp. 720 illustrated. Philadelphia: Saunders, 1970.

# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

*Classified advertisements of a professional nature are free to members.*

## REAL ESTATE

FOR SALE: Choice building lot for physician or dentist office-home combination. Lot is level, sidewalk and all utilities are in. Ideal location on corner of Old Georgetown and Bells Mill Roads, opposite Wildwood Shopping Center. Excellent financing available. Telephone (202) 299-3101.

FOR SALE: Ideal professional residence, North Portal Estates, upper 16th Street, N. W. Large, custom-built A/C rambler, 4 bedrooms, living room, dining room, den, 4 baths, finished rec. room, bar, maid's room, screened porch, large patio and modern kitchen. 8-room professional offices: separate entrance including reception room, laboratory, consulting room, 4 treatment rooms, X-ray room, powder room. Many extra features throughout including extensive panelling and insulation, cabinets, storage facilities. MUST BE SEEN. Contact Mr. Miller, James L. Dixon & Co., Realtors, (202) Fe 8-7200.

FOR SALE: Home & office or possible clinic. 906 E. Capitol street. A traditional medical boulevard with zoning approved for clinic. Completely modernized sunny mansion, with 3-room office on ground floor. Many luxury features, including central a/c, electronic fire & Burglar alarms, intercoms, built-in storage in every room, super kitchen, etc. Perfect set-up for urban practice and family living. Telephone M. D. owner (202) 656-3538, evenings and week-ends.

## OFFICE SPACE AVAILABLE

TO SUBLEASE: 1726 Eye Street, N. W., New Medical Building. 750 sq. ft., 1 waiting room, 3 examining rooms, 1 consultation room, & 2 small labs. Lease expires February, 1972, moving January 1971. Contact Dr. Schwab, (202) 298-8197.

FOR RENT: Physician's offices just off Massachusetts Avenue, N. W., in modern air-conditioned apt. building. First floor suite has paneled, carpeted physician's office, receptionist's office, waiting room, 3 examining rooms, 2 powder rooms. Formica counters and built-ins throughout. Reserved parking space. All utilities included. Reasonable rent. Telephone (202) 234-1172.

FOR RENT: One choice medical office available. Approximately 500 sq. ft. Many windows. Private powder room. All utilities, char service, central individually controlled air-conditioning included. Contact owner/manager, 1800 Eye Street Medical Building. Telephone (202) Re 7-1299.

FOR RENT: 1726 Eye Street, N. W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service; parking available. Telephone (202) 298-6936.

## PRACTICE AVAILABLE

PRACTICE FOR SALE: Dermatology practice available. District of Columbia and suburbs. Two offices completely equipped with X-ray, Grenz-ray, etcetera. Includes laboratory equipped for hematology, chemistries, microbiology, micology, and zerology, and certified by D. C. Health Department. Gross over $100,000. Price negotiable. Extremely low cash needed. Will stay to introduce. Reply Box 53, 2007 Eye Street, N. W., Washington, D. C. 20006.

## EQUIPMENT FOR SALE

WATER BATH, small, perfect condition. Original price $115.00. Will sell for $50.00 S. J. Randall, M. D. Telephone (202) 363-1010.

HAMILTON EXAMINING TABLE and matching walnut chair, instrument cabinet, and dressing stand. 50" office desk and chair. Surgical instruments. Telephone 234-6646 or 265-0065.

"Cappy"

INTRODUCES THE WASHINGTON AREA SPECIALISTS *in collections for Professionals*

I'M
"Cappy"
an Old Fashioned girl with MODERN ideas about bill collecting . . .

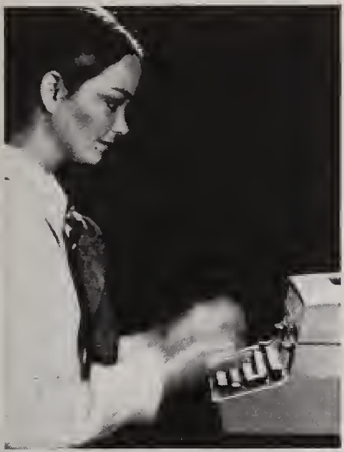
*Unless We Collect, There Is No Charge*

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.



# Dear Sir:

# Even the fastest typist in your office will slow down your letters if she doesn't use the ZIP CODES

| List below the addresses (no names necessary) of the people whose Zip Codes you need: | Post Office will fill in Zip Codes here |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Your Name____________________

Your Address____________________

City____________________

State____________________Zip__________

Place in stamped envelope and mail to: Local Post Office.
No return envelope necessary.

Money for shorthand.

Money for electric typewriters.

Money for an efficient mail room.

None of it makes much sense if your letter is going to spend unnecessary hours at the Post Office.

And that's what may happen if your secretary doesn't have the Zip Codes she needs.

Which is why we printed the coupon at left.

Tell your girl to fill it out and mail it in. We'll supply the Zip Codes she's missing. Free.

Then, when you rush off a letter and she rushes it out, we can keep right on rushing it.

All the way to its destination.

*Mail moves the country –*
*ZIP CODE moves the mail!*

**advertising contributed**
**for the public good**

ADVERTISING COUNCIL®

# INDEX OF ADVERTISERS

**These Advertisers Support Your Journal.
Please Give Them Your Support.**

*Page*

**Bank**
- RIGGS NATIONAL BANK . . . 4

**Business Counseling**
- DATA MEDICS . . . 9

**Collection Agencies**
- CAPITAL CREDIT CORPORATION . . . 10
- CREDIT BUREAU, INC. . . . T-40

**Dietetic Products**
- CAMPBELL SOUP COMPANY . . . 23

**Insurance**
- McDERMOTT INSURANCE, INC. . . . T-70
- MUTUAL OF OMAHA . . . 3-C

**Equipment and Supplies**
- KLOMAN SURGICAL SUPPLY COMPANY . . . 50

**Investment Planning**
- FERRIS & COMPANY . . . 53
- EUGENE F. ROESSER . . . T-81
- RUSSELL, MARSH, & KENNEDY . . . T-40

*Page*

**Nurse Registries**
- ASSOCIATION OF UNDERGRADUATE AND PRACTICAL NURSE REGISTRY . . . T-68
- DISTRICT OF COLUMBIA MANPOWER ADMINISTRATION . . . T-60

**Pharmaceuticals**
- ARCH LABORATORIES . . . T-54
- BRISTOL LABS. . . . T-37
- BURROUGHS-WELLCOME . . . T-33–36
- ELI LILLY & COMPANY . . . 8
- NATIONAL DRUG . . . 13–14, T-31–32
- WM. P. POYTHRESS . . . T-64
- A. H. ROBINS COMPANY . . . T-62–63
- ROCHE LABORATORIES . . . T-35–36, 38
- G. D. SEARLE . . . T-24–25
- STUART PHARMACEUTICAL . . . T-26, 58–59
- THE UPJOHN COMPANY . . . T-57
- WARNER-CHILCOTT . . . T-54–55

**Pharmacies**
- MAXWELL & TENNYSON . . . 9
- PEOPLES DRUG STORES . . . T-30

**Sanitariums**
- KALORAMA CONVALESCENT HOME . . . T-54

**Vacation & Recreation**
- BOAR'S HEAD INN . . . T-70

T-text

## A
## BUILDING BLOCK
## TO RECOVERY

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs One tablet q.i.d.
Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma

**One tablet q.i.d.**

**Indications:** When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
**Contraindications:** ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
**Precautions:** It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
**Adverse Reactions:** Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
**Dosage:** One tablet q.i.d.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**
TRADEMARK: BITABS U.S. PATENT NO 3,004,893 9/70 0-009A 161

# Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

# The causes of vaginitis are multiple

**Trichomonads . . . monilia . . . bacteria**
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

**AVC**
**Cream** (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

**Suppositories** (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

**Contraindications:** Known sensitivity to sulfonamides.
**Precautions/Adverse Reactions:** The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
**Dosage:** One applicatorful or one suppository intravaginally once or twice daily.
**Supplied:** Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

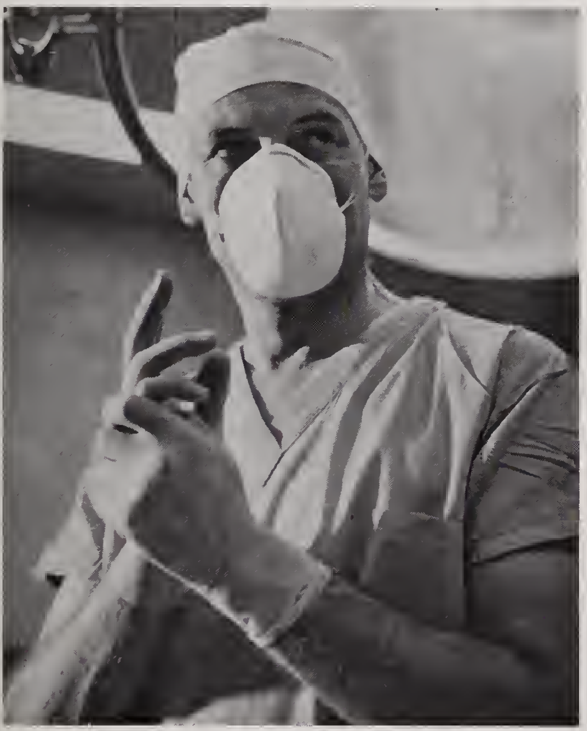
TRADEMARK: AVC AV-007A 7/70 Y-149

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

# AVC
# The treatment is singular

# Make Sure You Have Cash To Live On When You're Disabled!

Even doctors get sick and hurt! When your turn comes and you can't continue your practice, will you still be able to provide for yourself and your family—pay for food, clothing, your home, the everyday living expenses, plus extra medical bills?



You can have this financial security with the Disability Income Protection Plan available to members of the Medical Society of the District of Columbia.

PAYS UP TO $225.00 A WEEK
($975.00 each month) when you're sick or hurt and can't practice!

*Check these other important features of this plan:*

- Benefits are TAX-FREE, for you to use as you see fit.
- Confinement is never required during disability.
- Benefits are payable regardless of other coverage.
- There is no automatic age termination.
- Your policy is guaranteed renewable while the program remains in force regardless of benefits paid to you or any future changes in health.
- Premiums are low, due to the mass purchasing power of your Society.
- There are few exceptions. Your policy does not cover: suicide or attempted suicide; loss during a declared or undeclared war or while a member of an armed service; loss due to noncommercial flying; costs of childbirth, pregnancy or any complication.

Fill out the coupon below and mail it today! You'll receive complete information on this outstanding Disability Income Protection Plan available to you as a member of the Medical Society of the District of Columbia. Don't delay!

JOSEPH E. JONES, Administrator
1666 Connecticut Avenue, N.W.
Washington, D.C. 20009 Phone: (202) 483-3100

Please rush to me complete information on the Disability Income Protection Plan available to me as a member of the Medical Society of the District of Columbia!

Name______________________________

Address______________________________

City______________State__________ZIP Code______

Underwritten by

Mutual of Omaha®
*The Company that pays*

Life Insurance Affiliate: United of Omaha

MUTUAL OF OMAHA INSURANCE COMPANY
HOME OFFICE: OMAHA, NEBRASKA

# anxiety: the tyrant

Excessive anxiety can often dominate the patient made vulnerable by illness, surgery, prolonged emotional stress. It can induce or aggravate symptoms, disrupt medical management, divert energy the patient needs for recovery.
The antianxiety action of Librium® (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in virtually every field of medical practice where anxiety complicates the patient's condition.

## for the patient ruled by anxiety

# Librium®

## (chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley New Jersey 07110

DISPLAY SHELVES

*Volume 40 · Number 2 · February 1971*

# Medical Annals of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

**Escherichia Coli Meningitis**
V. Scheidemandel, C. W. Campbell, and J. A. Curtin

**Recent Advances in Neurological Surgery**
J. L. Fox

**Creatine Phosphokinase**
A. M. Attar and C. Mata

**Ventilatory Problems in Infants and Children**
J. E. McClenathan and J. M. Lopresti

**Utilization of Side Effects Through Molecular Manipulation**
F. W. Wolff, J. Basabe, A. Grant, S. Grant
N. Lopez and J. Viktora

**Post-Traumatic Pulmonary Insufficiency**
M. J. Casey

**Dyspnea, Fever, Anasarca in 39-Year-Old Woman**
C. Smith

**Delayed Growth with Primary Hepatoma**
J. C. Seymour

(*Complete Index on Page 5*)

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
22 MAR 1971

The John Vinton Dahlgren Memorial Library at Georgetown University Medical Center (see page 146).

Boston, Mass. 02115

Menrium® treats the menopausal symptoms that bother him most.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
22 MAR 1971

His wife has a lot of different
enopausal symptoms, but only a few
eally irritate *him*. Her hot flashes, her
ertigo, her palpitations—that's *her*
roblem. What really bothers him is
er nervousness, her irritability and
er excessive anxiety, often expressed
y endless "book-shuffling, chain-
moking, reading-lamp" insomnia!

Menrium takes care of hot flashes,
ertigo, palpitations in most
enopausal women. Menrium
rovides the well-known antianxiety
ction of chlordiazepoxide (Librium®)
nd water-soluble esterified estrogens.
t therefore relieves more symptoms
han either component separately.
t takes care of the vasomotor
ymptoms as well as the emotional
ymptoms. This means the symptoms
hat bother his wife most. And the
ymptoms that irritate him most.

So, to help them both get through
*er* menopause, remember Menrium.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

**Contraindications:** Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

**Precautions:** In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

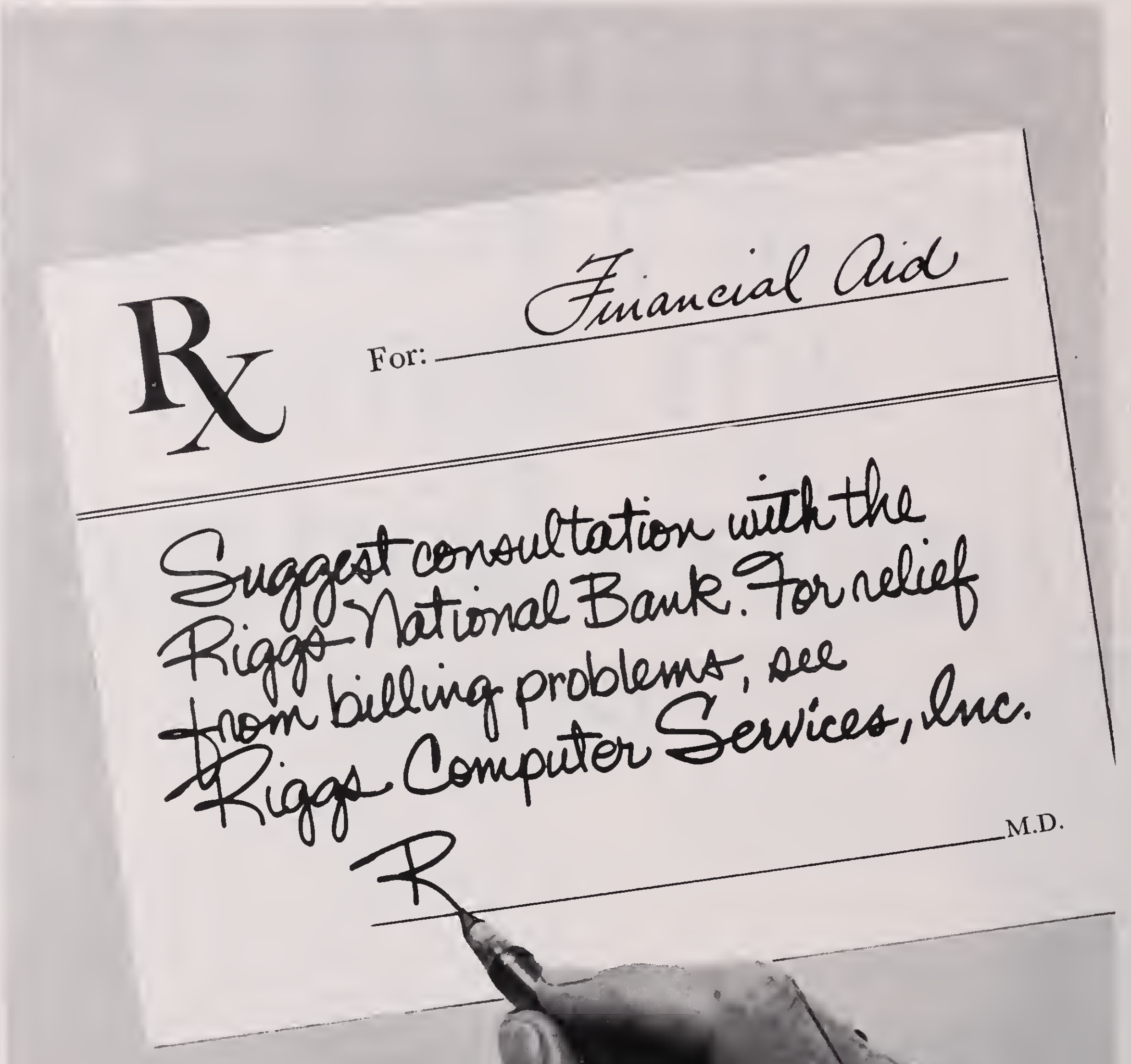
**Adverse Reactions:** Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

**Usual Dosage:** One tablet t.i.d. for 21 days, followed by one-week rest periods.

# Menrium® T.I.D.

| | | |
|---|---|---|
| **5 mg chlordiazepoxide** | 5-2 | **0.2 mg water-soluble esterified estrogens** |
| **5 mg chlordiazepoxide** | 5-4 | **0.4 mg water-soluble esterified estrogens** |
| **10 mg chlordiazepoxide** | 10-4 | **0.4 mg water-soluble esterified estrogens** |


Rx
For: Financial Aid
Suggest consultation with the Riggs National Bank. For relief from billing problems, see Riggs Computer Services, Inc.
R
M.D.

*The*
**RIGGS**
**NATIONAL**
**BANK**

RIGGS COMPUTER SERVICES, INC.

*of* WASHINGTON, D.C. • FOUNDED 1836

**Member Federal Deposit Insurance Corporation · Member Federal Reserve System · Phone 783-5600**

**VOLUME 40 • FEBRUARY 1971**

**EDITOR**

Wallace M. Yater, M.D.

**ASSISTANT TO THE EDITOR**

Judith E. Perruso

**MANAGING EDITOR**

Francisco P. Ferraraccio

**EDITORIAL BOARD**

Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**

Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
James A. Halsted, M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
Howard Katzman, M.D., First Vice President*
James E. Boland, M.D., Second Vice President*
Mr. Thomas Sadler, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Frank S. Bacon, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

# MEDICAL ANNALS of the DISTRICT OF COLUMBIA

2007 Eye Street, N.W.    Washington, D.C. 20006

**The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

[illegible]-7019

# Who's afraid of the big bad enema?

**We all are.** But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can – except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents", and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

**Dulcolax®...it's predictable**
bisacodyl

Geigy GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 UNDER LICENSE FROM BOEHRINGER INGELHEIM G. M. B. H.

MEDICAL ANNALS
of the District of Columbia

## *Contents for February*

### SCIENTIFIC ARTICLES

Escherichia Coli Meningitis. Treatment with Gentamicin Sulfate. *Volker Scheidemandel, M.D.*, Miami, Florida, *Cary W. Campbell, M.D.* and *James A. Curtin, M.D.*, Washington, D. C. 85

Recent Advances in Neurological Surgery. *John L. Fox, M.D.*, Washington, D. C. 88

Increased Levels of Creatine Phosphokinase After Intramuscular Injections. *Ali M. Attar, M.D.*, Boston, and *Carlos Mata, M.D.*, Washington, D. C. 92

Ventilatory Problems in Infants and Children. *James E. McClenathan, M.D.*, and *Joseph M. LoPresti, M.D.*, Washington, D. C. 94

Utilization of Side Effects through Molecular Manipulation. *Frederick W. Wolff, M.D.*, *Juan Basabe, M.D.*, *Alison Grant, M.D.*, *Stephen Krees, M.D.*, *Nestor Lopez, M.D.*, and *Josef Viktora, M.D.*, Washington, D. C. 98

Recognition of the Syndrome of Post-Traumatic Pulmonary Insufficiency in a Patient with severe trauma. Report of a Case. *Maurice J. Casey, M.D.*, Washington, D. C. 103

Dyspnea, Fever, and Anasarca in a 39-Year-Old Woman; A Clinicopathologic Conference. *Chandler Smith, M.D.*, Washington, D. C. 106

Delayed Growth and Pubescence Associated with primary Hepatoma. *John C. Seymour, M.D.*, Washington, D. C. 110

### SPECIAL SECTION

History of the Medical Society of the District of Columbia. Chapter VIII. *Theodore Wiprud* 119

### MISCELLANY

President's Page: "Medicine & Politics" 121
Summary of Executive Board Actions 141
Health Department Notes 142
DOCPAC Briefs. *William H. Cooper, M.D.*, Washington 143
Clinical Center Studies 144
Over the Desk 144
1971 AMA Meeting Dates 145
New Members 145
Meetings 145
General News 146
Book Reviews 154
Obituaries 155
National & Regional Meetings 156
*Medical Annals Staff & Officers of the Medical Society* Adv. 5
*Classified Advertisements* Adv. 14
*Index of Advertisers* Adv. 20

COPYRIGHT ©, 1971 BY THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA. *Yearly Subscription, $8.00. Single Number 75¢. Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

ONLY ONE FIRM CAN PROVIDE ALL THESE SERVICES, OR ANY ONE OF THEM . . .

- A complete low-cost patient billing service
- Confidential information on every account
- An ethical and effective collection service
- A dignified pre-collection service
- Professional accounts receivable consultation

**THE CREDIT BUREAU, INC.**

FOUR OFFICES TO SERVE YOU LOCALLY

WASHINGTON, D.C.; ROCKVILLE, MD.; FAIRFAX, VA.; ALEXANDRIA, VA.

3,000 CLOSELY ASSOCIATED AGENCIES THROUGHOUT THE COUNTRY

**Call Now to Arrange an Appointment with Our Representative**

ED GARRETSON NAtional 8-0680

**INSURANCE FOR THE DOCTOR**

RMK

*Insurance Brokers and Consultants*

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

* endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

**Maxwell and Tennyson . . .**
**alive and well at 19th street!**

Our leases at 1801 and 1835 Eye St. were terminated so quickly, there was no time to properly plan to take care of our good customers in the customary Maxwell and Tennyson style.

Our operations are now consolidated at 916—19th, fully staffed and fully stocked. Not one, but *three* telephones available for your calls. And of course, never a charge for delivering prescriptions.

M&T MAXWELL & TENNYSON, INC.
*Pharmacists*

"WHERE PHARMACY IS A PROFESSION"

916 19th. Street, N.W. Washington, D.C.

**PHONES**

223-9797
223-9798
223-4711

BIOLOGICALS—VACCINES—SERUMS—HYPO-ALLERGENIC COSMETICS

ILOSONE
LIQUID
250
Lilly

**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
**Ilosone® Liquid 250**
Erythromycin Estolate
(equivalent to 250 mg of base per 5-ml. teaspoonful)

*Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206*

Lilly

100204

MEDICAL ANNALS
of the District of Columbia

February 1971
VOLUME XL • NUMBER 2

# Escherichia Coli Meningitis—Treatment with Gentamicin Sulfate.*

VOLKER SCHEIDEMANDEL, M.D.† CARY W. CAMPBELL, M.D. AND JAMES A. CURTIN, M.D.

GENTAMICIN SULFATE has been used in man since 1962[1] and is effective in treatment of serious systemic and local infections caused by various gram-negative bacteria. Its success rate in gram-negative infections of the central nervous system in children has been encouraging[2,3] and has prompted its use in adults.[3,4] Rubenfire[5] described its successful administration in a patient with Paracolobactrum epidural abscess and meningitis, as did McHenry[4] in a patient with *Escherichia coli* meningitis. We are reporting the use of combined intrathecal and intravenous Gentamicin in a patient with meningitis due to *Escherichia coli.*

### Report of Case

A 33-year-old male brick mason was hospitalized because of a gunshot wound in the abdomen. He was alert and oriented. The blood pressure was 135/80 mm Hg, the pulse rate 92 per minute, the temperature 99.4°F, and respiratory rate 26 per minute. There was an entrance wound in the mid-epigastrium without an exit wound. The abdomen was diffusely tender and silent. There was paraplegia which was complete distally with minimal motor activity in the flexor muscles of both thighs. All deep tendon reflexes were absent in the lower limbs, and complete anesthesia was evident below the L5 dermatome. There was incontinence of feces and urine. X-ray films of the lumbar spine revealed the bullet to be lodged behind the body of the 4th lumbar vertebra (figure 1) suggesting that it had entered the spinal canal or that metallic fragments produced hemorrhage into the cauda equina without perforating the dura. Therapy was started with intravenous Cephalothin, 1 gm every 4 hours. Dexamethasone sodium phosphate at doses of 4 mg every 6 hours intramuscularly was added. Four hours after admission a through-and-through perforation of the stomach and descending colon was sutured. The point of missile exit was in the left psoas muscle at the level of L4. The patient remained febrile postoperatively, but cultures of blood, urine and sputum were negative.

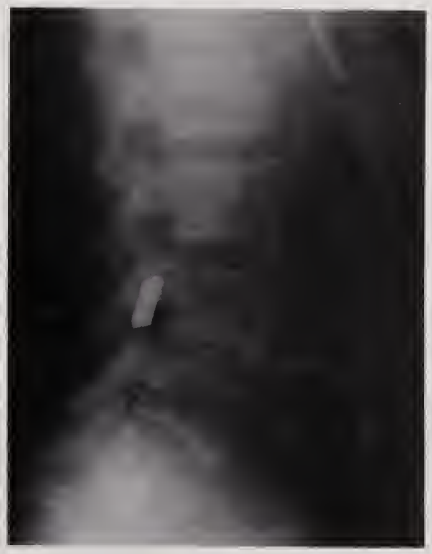


FIG. 1. Bullet located behind fourth lumbar vertebra.

On the 8th hospital day there was evidence of nuchal rigidity. The sensorium remained clear. A lumbar puncture yielded bloody cerebrospinal fluid (CSF) with xanthochromic supernatant. The opening pressure was 350 mm $H_2O$ and the fluid contained 23,500 crenated red blood cells and 1,350 white blood cells per $mm^3$, with 38 per cent neutrophils and 62% lymphocytes. CSF glucose was 49 mg per 100 ml with a blood glucose of 108 mg per 100 ml. The Gram stain was negative, but the culture grew an antibiotic-sensitive *Escherichia coli*. Chloramphenicol was started after the lumbar puncture in a dose of 6 gm daily I.V. The patient complained of severe frontal headaches and became stuporous with increasing nuchal rigidity on the 11th hospital day.

---

* From the Departments of Medicine and Neurological Surgery, Washington Hospital Center, Washington, D. C. 20010.

† Requests for reprints should be addressed to: Dr. Volker Scheidemandel, Jackson Memorial Hospital, University of Miami Medical School, Miami, Florida 33136.

Another CSF examination showed 10,450 polymorphonuclear cells per mm$^3$ with a glucose of 20 mg per 100 ml. Gram stain showed a few Gram-negative rods, and a culture revealed *Escherichia coli*. Anaerobic organisms were not isolated. Cephalothin, although effective in vitro, was discontinued, and Ampicillin 12 gm daily intravenously was begun. Twenty-four hours later fever persisted, and the clinical status was unimproved. Gentamicin sulfate, 5 mg (diluted in 5 ml of sterile normal saline) every 12 hours intrathecally, and 5 mg per kg per day i.v. in 3 divided doses was started (figure 2). There was significant clearing of the mental status, and the temperature fell to 99°F within 24 hours. On the 15th hospital day the patient was alert, oriented, and able to take oral feedings.

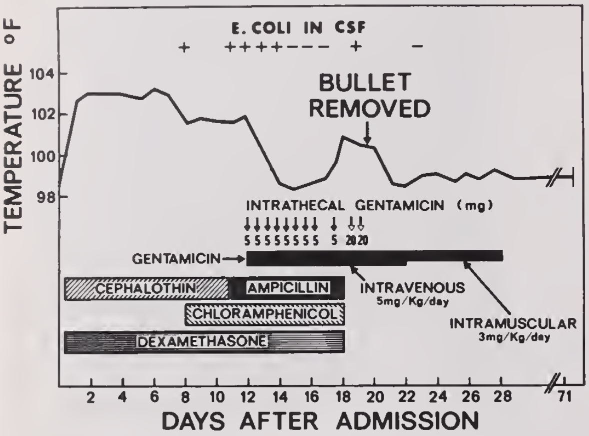


FIG. 2. Therapy and temperature course.

CSF cultures from the 15th to 17th hospital day were negative. A serum antibacterial test performed on the 17th hospital day, 1 hour prior to intravenous Gentamicin, was bactericidal at a serum dilution of 1:2 and bacteriostatic at a serum dilution of 1:8.

On the 18th day the temperature rose to 101°F, but his mental status was stable. Intrathecal Gentamicin was increased to 20 mg daily. Another CSF culture on the 19th hospital day grew 2 colonies of *E. coli* sensitive as before to Chloramphenicol, Ampicillin and Gentamicin. Since the bullet and its tract were the probable source of recurrent meningitis, the patient underwent total laminectomy of L3 and L4 9 days after Gentamicin had been started. The dura appeared contused, but there was no perforation. No gross abscess was found, and the missle was extra-dural. Cultures obtained from the bullet nidus yielded a few colonies of *E. coli* with the same sensitivity pattern. Eighty mg of Gentamicin in 10 ml of sterile normal saline had been injected directly into that area prior to wound closure. Postoperatively the temperature returned to normal. Gentamicin was continued at 3 mg per kg of body weight per day intramuscularly in 3 divided doses. The patient remained alert and the spinal fluid on the 3rd postoperative day was sterile. Gentamicin was discontinued 8 days later. The duration of therapy was 11 days intravenously, including 9 days intrathecally plus 8 days intramuscularly.

Physical therapy resulted in general muscular re-conditioning, but there was no improvement in the paraplegia. Renal function and otologic status were normal. The patient was transfered to a rehabilitation facility on the 71st hospital day. Re-examination 5 months after discharge showed no signs of recurrent meningitis and no change in the neurological status.

## Discussion

*Escherichia coli* meningitis in adults occurs as a complication of penetrating head and spinal wounds.[4,6] During the British Burma campaign in World War II virulent strains were encountered which produced suppurative menigitis and ventriculitis in patients with head wounds[7] in contrast to Appelbaum's analysis of meningitis in 91 civilians following head trauma in which no *E. coli* infection occurred.[8] Nineteen non-traumatic cases have been reported,[9,10] including the first case reported by Theys in 1923.[9] Most cases were associated with overwhelming *E. coli* infections in young children, especially neonates with congenital defects in the structures surrounding the spinal cord.[10,11]

Mortality due to *E. coli* meningitis was significantly reduced by Streptomycin as first reported by Alexander.[12] Intramuscular administration did not produce cerebrospinal fluid levels adequate to cure coliform meningitis.[13] Intrathecal Streptomycin was recommended[13] but induced seizures when used in high concentrations.[14,15] Respiratory arrest and death occurred in a patient who received Streptomycin intracisternally.[16] Streptomycin may also cause an increase in the protein content of the cerebrospinal fluid.[15]

Recently, triple therapy with Streptomycin, Chloramphenicol and Sulfadiazine or Ampicillin has been recommended.[11,14,17] In the presence of meningitis intravenous Ampicillin or Chloramphenicol produces drug levels in the CSF approaching those of serum.[18,19] Although the latter drugs were used in high doses and were active by disc sensitivity, they did not produce bacteriologic or clinical improvement in our patient. Meningitis developed while the patient was being treated with Cephalothin despite clinical evidence that it usually penetrates the blood-brain barrier in the presence of increased spinal-fluid protein.[20,22]

Gentamicin sulfate has been successfully used to treat gram-negative meningitides in infants aged 14 days to 13 months.[23,24,25] Nunnery and Riley[22] cured two infants with *E. coli* meningitis using intramuscular Gentamicin. In 2 infants treated by Leedom et al[24] *E. coli* disappeared from the spinal fluid after intramuscular and intraventricular Gentamicin treatment. From the experience of other investigators[2,3,5,4,6-8] it appears that in order to maintain effective CSF levels of the drug, combined intramuscular-intraventricular administration is indicated.

In this patient *E. coli* meningitis developed after a gunshot wound in which the missile penetrated the large bowel. Intrathecal and intravenous Gentamicin resulted in clinical improvement and the CSF became sterile after 3 days. A slight growth of *E. coli* recurred on the 7th day, and the intrathecal Gentamicin dose was increased. This improvement in the patient's condition permitted surgical removal of the missle, following which bacteriologic cure was achieved.

Experience with the use of intrathecal Gentamicin in gram-negative meningitides in adults is limited. There is a report on its use in *E. coli* meningitis in an adult in whom intramuscular and intrathecal Gentamicin was required for bacteriologic cure.[4] Our patient received intravenous Gentamicin in high doses. No information is available on the CSF levels of Gentamicin when it is given intravenously. However, in the presence of meningitis intramuscular administration produces levels in the CSF approaching those in serum.[2,25]

Gentamicin may be ototoxic when administered parenterally, affecting the vestibular and acoustic system.[26] A single blood level of 13 mg per ml has been associated with permanent vestibular damage.[27] In patients with renal insufficiency it must be given in reduced doses.[28,29] The incidence of nephrotoxicity is reported as 2% or less; elevations in blood urea nitrogen can occur but are reversible.[28] Our patient received a total dose of 5,605 mg of Gentamicin (4,000 mg intravenously, 1,440 mg intramuscularly, 85 mg intrathecally, and 80 mg in the missile nidus at the time of neurosurgery). No impairment of renal or vestibular function was demonstrable. Fasano[25] has given 480 mg Gentamicin intrathecally within a 3-day period without toxicity occurring.

In this patient it was necessary to remove the bullet to achieve bacteriologic cure. The combined intrathecal and intravenous administration of Gentamicin produced sufficient clinical improvement to permit surgical intervention.

## Summary

Persistent *Escherichia coli* meningitis developed in a patient with an abdominal gunshot wound which produced paraplegia. Treatment with 3 antibiotics was unsuccessful. Administration of combined intrathecal and intravenous Gentamicin sulfate resulted in sufficient clinical improvement to permit removal of the foreign body and produce bacteriologic cure. The outcome would probably have been fatal without the use of Gentamicin.

## References

1. JACKSON, G. G.: J. Infect. Disease, 1969, 119, 341.
2. NEWMAN R. L. AND HOLT, R. J.: Brit. Med. J., 1967, 2, 539.
3. NEWMAN, R. L., AND HOLT, R. J.: J. Infect. Dis., 1969, 119, 471.
4. MCHENRY, M. C., ET AL: J. A. M. A., 1970, 212, 156.
5. RUBENFIRE, M., ET AL: Amer. J. Med. Sci., 1969, 257, 191.
6. MANESIS, J. G., STANOSHECK, J: Arch. Neurol. (Chicago), 1965, 13, 214.
7. JOHNSON, R. T.: Brit. J. Surg. (war surgery suppl.), 1947, 1, 172.
8. APPELBAUM, E.: J. A. M. A., 1960, 173, 1818.
9. THEYS, GEHRCHE; Arch. Path. Anat., 1923, 246, 318.
10. NEAL, J. B.: Amer. J. Med. Sci., 1926, 172, 740.
11. KUNIN, C. M., BENDER, A. S., AND RUSSELL, C. M.: Arch. Intern. Med., 1965, 115, 652.
12. ALEXANDER, A. J.: J. A. M. A., 1946, 131, 663.
13. PILCHER, C., SMITH, E. R.: Ann. Surg., 1949, 129, 810.
14. HANBERRY J. W.: Neurology, 1954, 4, 301.
15. PAINE, T. F. ET AL: Ann. Intern. Med. 1947, 27, 494.
16. VALEGAKIS, F. E. G., HAYS, D. S., SUTHERLAND, A. M : J. A. M. A., 1950, 142, 720.
17. ETTELDORF, J. N.: J. A. M. A., 1955, 159, 746.
18. ZECH, M. P., ROBERT, M , AND TRAEGER, J.: Lyon Med., 1967, 218, 307.
19. ALEXANDER. H. E.: Med. Clin. N. Amer., 1958, 42, 575.
20. VIANNA, N. J. and KAYE, D.: Amer. J. Med. Sci., 1967, 254, 216.
21. LERNER, P. I.: Amer. J. Med. Sci., 1969, 257, 125.
22. HOLT, R. J., AND NEWMAN, R. L.: Intrathecal Gentamicin in the treatment of ventriculitis. Presented at European Symposium on Gentamicin. Bergenstock, Switzerland, June 6-8, 1968.
23. NUNNERY, A. W., AND RILEY, H. D.: J. Infect. Dis., 1969, 119, 460.
24. LEEDOM, J. M. ET AL: J. Infect. Dis., 1969, 119, 476.
25. FASANO, V. A.: Gentamicin in the treatment of infections complicating neurosurgery and neurotraumatology. Presented at Gentamicin-First International Symposium, Paris, January, 1967.
26. WESALL, J., LUNDQUIST, P. G. AND BJORKROTH, B.: J. Infect. Dis.. 1969, 119, 410.
27. BULGER, R. J., SIDELL, S., AND KIRBY, W. M. M.: Ann. Intern. Med., 1963, 59, 593.
28. FALCO, F. G., SMITH, H. M., AND ARCHIERI, G. H.: J. Infect. Dis., 1969, 119, 406.
29. GINGELL, J. C. AND WATERWORTH, P. M.: Brit. Med. J., 1968, 2, 19.

## Supplemental References

BARRETT, G. S., RAMMELKAMP, C. H. AND WORCESTER, J.: Amer. J. Dis. Child, 1942, 63, 41.
BINNS, J. O., AND PANKEY, G. A.: J. Louisiana Med. Soc., 1966, 118, 493.

*(Continued on page 109)*

# Recent Advances in Neurological Surgery

JOHN L. FOX, M. D.*

THE PAST DECADE has witnessed many significant advances in the diagnosis and treatment of neurosurgical problems. Hopefully, many more can be expected in spite of recent curtailment of financial support of medical research and education. Much of the new techniques can be attributed to advances made in fields allied with neurosurgery including anesthesiology and radiology. The rapidity with which new concepts and methods are being developed often prevents busy physicians from keeping up with this specialty and appreciating what may be available for their patients.

### Relief of Pain

A major treatment of intractable pain due to cancer or certain benign afflictions is the percutaneous cordotomy.[1,2] The spinothalamic tract in the cervical spinal cord is blocked permanently with radiofrequency current passed through an electrode inserted under local anesthesia in the X-ray department. Pain and temperature sensations are lost below the cordotomy level on the opposite side of the body. The open surgical cordotomy with its increased risk is being abandoned and now is used only in very selected instances. Subsequent to this development has come the percutaneous trigeminal tractotomy for relief of intractable facial pain.[3] In this instance the electrode is passed via the foramen magnum into the descending tract of the trigeminal nerve on the same side as the facial pain. With the aid of biplane radiographic guidance (figure 1) and specific physiologic monitoring systems the procedure can be effected under local anesthesia. This method often is preferable to interruption of the trigeminal nerve itself since touch sensation is preserved and pain sensation transmitted by the 5th, 7th, 9th, and 10th cranial nerves is blocked thereby assuring wide-spread relief of pain, especially in cases with malignant carcinoma of the face, mouth, and nasopharynx.

A new and promising method of relief of pain is the implantation of a neuropacemaker. This requires placement of electrodes by surgical exposure over the spinal cord or sometimes along a peripheral nerve.[4,5] A pain inhibition system is stimulated by remote control resulting in relief of pain in many instances. Other less novel but valuable surgical techniques for the relief of pain include selective cutting of sensory nerves, injection of a mixture of Pantopaque and phenol into the lumbar subarachnoid space, sympathectomy, selective prefrontal lobotomy or cingulomotomy, and stereotaxic thalamotomy with coagulation of specific nuclear centers or pain pathways.

### Control of Intracranial Pressure

Increasing intracranial pressure has been one of the principal causes of morbidity and mortality in patients with severe head injury and patients undergoing brain surgery for problems such as neoplasm, hematoma, abscess, and aneurysm.[6] In the past 15 years much knowledge has been gained not only in neurophysiology but also in general physiology as it affects brain function. Practical application of such knowledge has greatly improved the survival of such patients.

Carbon dioxide is recognized as one of the most potent agents increasing intracranial pressure. Hence any build up of $CO_2$ which readily crosses the blood-brain barrier in the brain-injured patient with some respiratory depression will compound the problem. The use of immediate tracheostomy with its reduction of dead airspace in these patients can be life-saving in spite of the lack of any obvious "respiratory obstruction", although the tongue and pulmonary secretions often cause some obstruction to respiratory gas exchange. Tracheotomy allows $CO_2$ to be expelled without straining and lung secretions to be suctioned. Use of an endotracheal tube in such patients usually does not solve the problem but rather increases the dead airspace. Recognizing the importance of $CO_2$, neuro-anesthesiologists now routinely hyperventilate patients undergoing craniotomy to reduce brain bulk at surgery.[7] The arterial $pCO_2$ is brought down from a normal of about 40 mm Hg to about 30 mm. Hg.

---

* Associate Professor of Neurological Surgery, George Washington University Medical Center, 2150 Pennsylvania Avenue, N. W., Washington, D. C. 20037; Chief of Neurosurgery, Veterans Administration Hospital, Washington, D. C. 20422.

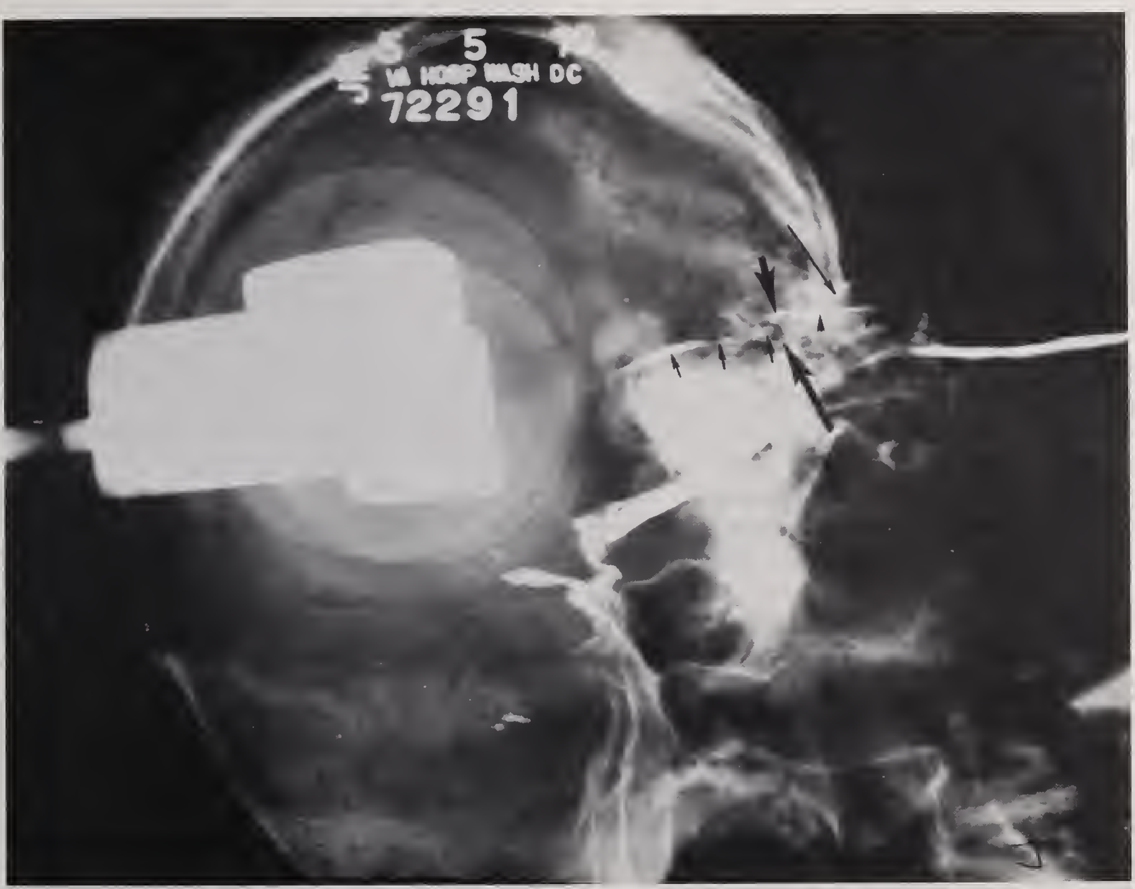


**Figure. 1. Trans-lateral X-ray film of skull in prone position after injection of 1 cc of emulsified Pantopaque into the cisterna magna. The 3 small arrows point to Pantopaque along the floor of 4th ventricle and the 2 small arrow heads point to Pantopaque over the dorsum of the cervico-medullary junction. The large posterior arrow indicates the obex of the medulla oblongata at the inferior corner of the 4th ventricle. The anterior large arrow shows the tip of the electrode in the descending trigeminal tract of the brainstem. The long thin arrow touches the guide-needle through which the electrode has passed. The guide-needle does not show up well on this reproduction.**

The use of fluid restriction in such patients has been routine in neurosurgery for many years, but only recently has the importance of critical fluid balance been recognized in terms of the inappropriate antidiuretic hormone (ADH) syndrome.[8] The post-craniotomy, head-injury, or stroke patient indeed may be unable to handle large fluid loads which may reduce the vascular osmotic pressure as water is retained. This situation results in greater edema of the brain and, if unrecognized, in increased morbidity. The syndrome is not uncommon in these patients and is recognized in part by the excretion of urine sodium (over 25 meq/L) in the face of a low serum sodium and osmolality. In most adult patients with edema of the brain fluids are restricted to about 1,500 c.c. of dextrose in half-normal saline per day, but if the syndrome definitely exists, greater fluid restriction (rather than more saline) is required. Older and sicker patients may have a very narrow margin of fluid intake: too much fluid administration results in retention in the presence of inappropriate ADH secretion, and too little results in elevation of the blood urea nitrogen (BUN).

A major advance in the control of edema of the brain was the use of glucocorticosteroids such as methylprednisolone or dexamethasone to control the edema.[9] The exact reason is unknown but appears to be related to effects on the blood-brain barrier and on ion-binding at the brain-cell level. If the patient has no history of peptic ulcer symptoms, the drug is started in large doses before surgery and is tapered off over a week's time. These are used almost routinely now, especially for brain neoplasms.

The use of intravenous 30% urea (0.5-1.5Gm/Kg) or more recently 15% or 20% mannitol (1.0 - 4.0 Gm/Kg) is the most rapid means of reducing intracranial pressure by increasing vascular osmotic pressure in the brain. The need for such agents is less now, and the delayed rebound in intracranial pressure still occurs in some instances. Hypothermia (usually at about 31°C or 88° F) is not routinely used anymore except in patients with severe brainstem injury such as from trauma or brain herniation. Avoidance of hyperthermia is critical. Elevation of the head, ventricular cerebrospinal fluid (CSF) drainage, and operative decompression remain of paramount importance.

## Diagnostic Advances

Another major cause of reduced mortality and morbidity in the field of neurosurgery has been earlier and more exact recognition of the problem. This in large part has been due to advances in neuro-radiology and radioisotope technique.

For example, pneumoencephalography (PEG) began in the 1920's, but radiologic instrumentation as well as the rotating PEG chair and tomography have advanced our ability to diagnose and localize brain tumors safely and rapidly.[10] Such a tool, however, requires intimate understanding of CSF dynamics and a recognition of the alternative, ventriculography, in selected instances. Again, knowledge of physiology has resulted in improved PEG films by the simple, more comfortable, and paradoxically safer method of not removing CSF as air slowly is injected through the lumbar puncture needle. This results in better ventricular filling and less subarachnoid irritation. In most instances some CSF can be removed after about 25 cc of air had been injected unless brain herniation is visualized. An intracranial pressure buffering mechanism allows this phenomenon, and indeed brain herniation is less likely *without* CSF removal in patients with brain tumor.

Cerebral angiography still remains the primary contrast study for identification of anomalies ultimately requiring neurosurgical treatment.[11] As arterial needle and catheter injection techniques have improved, as contrast media have become safer to use in skilled hands, and as special subtraction, magnification and stereoscopic filming techniques have become available, angiography of both the brain, and more recently, the spinal cord have been more widely utilized. In the old days stroke patients were put to bed and given appropriate nursing care. We now recognize that many such patients may have curable, or least partially remediable, lesions such as carotid-artery stenosis, intracranial aneurysm or arteriovenous malformation, and subdural or intracerebral hematoma.

Chronic subdural hematoma in the elderly not uncommonly is misdiagnosed either as a stroke or senile dementia. Non-traumatic subarachnoid hemorrhage is due to ruptured aneurysm in more than 50% of such patients with bloody, xanthochromic CSF.[12] Ligation of the aneurysm or excision of the carotid-artery plaque can prevent recurrence of hemorrhage or infarction which may be lethal. Evacuation of an intracerebral clot can reduce the morbidity in selected patients. Cerebral angiography can give us important information, and its use should not be delayed beyond a time period deemed optimal for a given patient.

Skull and spine X-ray films, electroencephalography (EEG), and CSF examination remain basic studies. Specialized views of the skull and selected EEG techniques have been developed. The CSF can be examined not only for appearance, pressure, cells, protein, sugar, colloidal gold, and routine serology but also occasionally for protein electrophoresis, malignant-cell types, certain enzymes, and FTA-abs for syphilis. Echoencephalography is a new, easy, safe, and rapid tool with sonar technique for detection of cerebral midline shift and more recently as an adjunct for detection of brain tumors and ventricular enlargement.[13]

A profound breakthrough in diagnostic techniques has been radioactive scanning. At present this includes 3 typical types: brain scanning (usually with mercury or technetium), strontium bone-scanning, and cisternography. Brain scanning is based on the principle that the brain lesion either selectively picks up the tracer or the injured blood-brain barrier allows the tracer to enter the lesion or damaged brain selectively.[14] Such lesions include neoplasm, abscess, hematoma, infarction, and some arteriovenous anomalies. Bone-scanning (skull or spine) often will show deposits of metastatic neoplasms and lymphomas.

With the advent of cisternography a new tool for the evaluation and diagnosis of both hydrocephalus and CSF leaks was heralded.[15] Normally, injection of a tracer such as 131-iodinated human serum albumin into the lumbar or cisternal CSF results in the radioactivity spreading into the basilar cisterns and then up over the cerebral hemispheres with absorption along the superior sagittal sinus completed within 48 hours. In communicating hydrocephalus, for example, radioactivity enters the ventricular system and remains for a couple of days (figure 2). This test has become especially significant recently, for we have recognized the common occurrence of hydrocephalus with a normal CSF pressure often occurring gradually after severe head injury, intracranial hemorrhage, and meningitis, and also without known etiology. These patients, who develop mental and neurologic deterioration, have been placed in nursing homes or other institutions, but some can be salvaged with a CSF shunt.

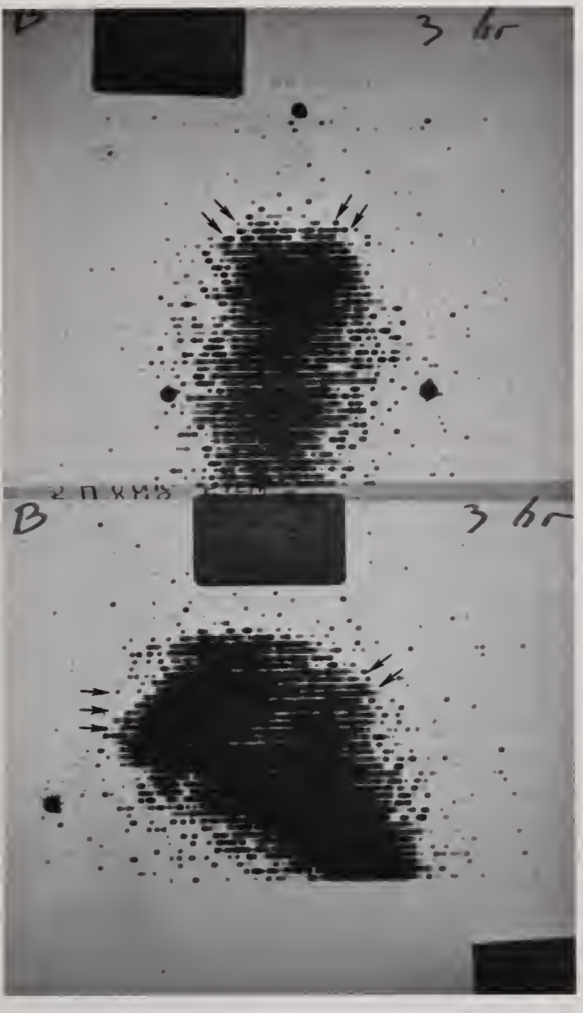


Figure. 2. Top: Posterior projection of cisternogram of the brain 3 hours after injection of radioactive iodinated albumin by lumbar spinal puncture. The arrows indicate ventricular uptake of the isotope consistent with communicating hydrocephalus.

Bottom: Same patient, left lateral projection. The triple arrows point to the frontal horns, and the double arrows point to the occipital-temporal horns. In 24- and 48-hour scanning the isotope remained in the basilar cisterns and ventricular system, failing to be absorbed over surface of brain.

## Operative Care

Surgical procedures never before considered now have become common-place; space prevents listing them in detail. Basilar artery aneurysms are no longer considered inoperable. Lesions in the base of the skull are being attacked successfully through a trans-clival approach. Arteriovenous malformations have been obliterated by a special embolization technique. Microsurgery of brain anomalies and vessels has been initiated and is advancing surgery of aneurysms, many benign tumors, and nerve repairs. Craniopharyngiomas are being totally excised. Glomus-jugulare tumors are being removed. As chemotherapy and radiation therapy prolong the lives of patients with cancer, excision of single metastases to the brain is common-place. Surgery for hydrocephalus has advanced significantly. Stereotaxic surgery of the brain and spinal cord has reached a high degree of sophistication. None of these would be possible without anesthesiology, radiology, better surgical instruments, medical electronics, intensive care unit nursing, neurologic research, and dedication by investigators in basic medical and physical sciences.

## References

1. MULLAN, S.: "Percutaneous cordotomy for pain" Pain, Henry Ford Hospital International Symposium. R. S. KNIGHTON AND P. R. DUMKE, editors. Boston: Little, Brown & Co., 1966, p. 321.
2. FOX, J. L. AND GREEN, R. C.: Acta Neurochir., 1968, 18, 318.
3. CRUE, B. L., TODD, E. M. CARREGAL, E. J. A., AND KILHAM, O. P.: Bull Los Angeles Neurol. Soc., 1967, 32. 86.
4. SHEALY, C. N., MORTIMER, J. T., AND HAGFORS, N. R.: J. Neurosurg. 1970, 32, 553.
5. SWEET, W. H., AND WEPSIC, J. C.: Trans. Amer. Neurol. Ass., 1968, 93, 103.
6. FOX, J. L.: J. Neurosurg., 1964, 21, 909.
7. HAYES, G. J., AND SLOCUM, H. C.: J. Neurosurg., 1962, 19, 65.
8. FOX, J. L., AND FALIK, J. L.: Neurosurgical hyponatremia: The role of inappropriate antidiuresis: J. Neurosurg., in press.
9. GALICICH J. H., AND FRENCH, L. A.: Amer. Practit., 1961, 12, 1969.
10. ROBERTSON, E. G.: Pnemoencephalography, 2nd edition. Springfield, Illinois, Charles C. Thomas, 1967.
11. TAVERAS, J. M., FISCHGOLD, H., AND DILENGE, D.: Recent advances in the Study of Cerebral Circulation. Springfield, Illinois: Charles C. Thomas, 1969.
12. LOCKSLEY, H. B., SAHS, A. L., AND SANDLER, R.: J. Neurosurg., 1966, 24, 1034.
13. deVLIEGER, M., AND RIDDER, H. J.: Neurology, 1959, 9, 216.
14. MISHKIN, F. S., AND MEALEY, J., JR.: Use and Interpretation of the Brain Scan. Springfield, Illinois: Charles C Thomas, 1969.
15. DI CHIRO, G., REAMES, P. M., AND MATTHEWS, JR.: Neurology, 1965, 14, 185.

# Increased Levels of Creatine Phosphokinase After Intramuscular Injections

ALI M. ATTAR, M. D.* AND CARLOS MATA, M. D.†

CREATINE PHOSPHOKINASE (CPK) is an enzyme which catalyzes the conversion of creatine phosphokinase to creatine–creatine–phosphokinase + ADP $\leftrightarrows$ creatine + ATP.

This enzyme is found in large amounts in skeletal muscle, heart, brain, and thyroid gland. Absence of this enzyme in the liver has been reported by some investigators.[2]

The clinical application of serum CPK measurement for muscle disease was introduced by Ebashi et al in 1959.[9] In 1960 Dreyfuss et al applies it to the study of myocardial infarction.

Since then, increased serum CPK activity has been found in other conditions such as brain disease, cellulitis, alcoholic intoxication, diabetic acidosis, convulsions, and after muscle trauma, electric shock, external cardiac massage, and surgical operations.

Recently Meltzer and et al[4] reported increased serum CPK activity in some patients in a psychiatric ward who were given intramuscular injections of Chlorpromazine. On the other hand, Bennet and Betts[5] reported normal level of serum CPK in 50 patients who received single intramuscular injections of analgesics and atropine pre-operatively.

Some of our patients admitted to the hospital because of suspected myocardial infarction had elevated serum CPK values lasting for several days. These patients received intramuscular injections of drugs such as morphine, Meperidine, diuretics, and Diazepam. Serial electrocardiograms and serum GOT and LDH determinations for 5 to 6 days did not show any abnormalities.

We studied a group of 19 adult patients in whom there was no clinical evidence of infections, muscle disease, cardiac failure, arhythmias, recent operations, or cerebrovascular accidents. These patients received multiple intramuscular injections of the following drugs: Meperidine, Diazepam, Methydopate Hydrochloride, Furosemide, morphine sulphate, and Diphenylhydantoin. Some of these patients had been taking some of these drugs orally for a period of 2 weeks to 1 year prior to this investigation.

## Methods

Blood samples were drawn for serum CPK, GOT, LDH determinations from the patients before and after intramuscular injections at intervals of 8, 12, and 18 hours. Since the serum CPK does not withstand storage well, its activity was measured within an hour after venipuncture and scrupulous technique was followed to prevent hemolysis which inhibits serum CPK activity.

Serum CPK activity was measured by an activated, single-vial, ultraviolet method after Oliver and Rosalki which is packaged by Boehringer-Mannheim; the normal value is up to 50 microunits per liter expressed in conventional units at 25° C.

Serum GOT and LDH were measured by the colorimetric methods of Babsan et al, packaged by Warner Chilcott. The normal value for SGOT is 9 to 36 units, the normal value for LDH is 24 to 78 units; both values are expressed in conventional units at 37° C.

## Results

As shown in the table, serum CPK activity was elevated in 14 of 19 patients and within the normal limits in 5 patients. Five patients had 4 injections each of Meperidine, phenobarbital and Diphenylhydantoin; the same number had 3 injections each of Methydopate Hydrochloride and Diazepam; 4 patients had 2 injections each of Meperidine and Diazepam; 3 patients had 2 injections each of Furosemide and Phenobarbital, and 2 patients had 3 injections of morphine sulphate, Furosemide, and phenobarbital.

The peak values were seen in blood samples obtained 12 hours following the injections. The highest value obtained was 252 mu/l and was seen in a patient who received 4 injections. There were no significant changes in the serum GOT and LDH levels in 18 patients. Only 1 patient had an elevation in SGOT value, and this followed 4 intramuscular injections.

---

[*] Written while a second year resident at Providence Hospital, 1150 Varnum Street, N. E., Washington, D. C. 20017.

[†] Associate Pathologist and Chief of Biochemistry, Providence Hospital, Washington, D. C.

TABLE 1

| Patient's No. | No. of Injections | Serum Enzymes Levels Prior to Injections | | | Serum Enzymes Peak Levels Following Injections | | | Time of Post-Injection Samples |
|---|---|---|---|---|---|---|---|---|
| | | CPK | GOT | LDH | CPK | GOT | LDH | |
| 1 | 3 | 8 | 34 | 77 | 56 | 33 | 80 | 12 |
| 2 | 2 | 16 | 18 | 61 | 68 | 40 | 64 | 18 |
| 3 | 2 | 21 | 30 | 72 | 94 | 39 | 76 | 8 |
| 4 | 3 | 32 | 26 | 152 | 47 | 34 | 68 | 12 |
| 5 | 4 | 19 | 38 | 64 | 102 | 39 | 69 | 12 |
| 6 | 2 | 32 | 31 | 89 | 87 | 55 | 91 | 18 |
| 7 | 4 | 15 | 22 | 58 | 122 | 25 | 49 | 12 |
| 8 | 2 | 4 | 48 | 62 | 28 | 47 | 79 | 8 |
| 9 | 4 | 23 | 36 | 81 | 252 | 48 | 82 | 12 |
| 10 | 3 | 31 | 45 | 53 | 88 | 49 | 68 | 12 |
| 11 | 3 | 7 | 24 | 51 | 20 | 42 | 58 | 8 |
| 12 | 2 | 13 | 33 | 64 | 62 | 39 | 70 | 12 |
| 13 | 4 | 18 | 31 | 74 | 99 | 39 | 78 | 12 |
| 14 | 2 | 22 | 33 | 78 | 38 | 36 | 81 | 18 |
| 15 | 3 | 12 | 31 | 59 | 81 | 42 | 52 | 12 |
| 16 | 4 | 16 | 43 | 63 | 108 | 140 | 50 | 12 |
| 17 | 3 | 39 | 31 | 42 | 94 | 39 | 49 | 8 |
| 18 | 3 | 26 | 40 | 63 | 49 | 42 | 67 | 12 |
| 19 | 2 | 21 | 37 | 51 | 89 | 34 | 71 | 12 |

## Conclusion

Our studies and those of Meltzer et al in human and those of Warnock and Ellman[7] in animals showed that multiple intramuscular injections of different drugs will produce a rise in serum CPK activity which may last 4 to 5 days. This rise can be explained by the extrmemly high content of the CPK in the muscle cells, which upon injury from injections is released to the serum. Additional considerations would be the toxic effect of the material injected or an increase in the muscle-cell volume at the site of injection, both of which could contribute to the elevation noted.

Because of this non-specificity of serum CPK, Hunt and Bailie[3] concluded that the clinical value of the serum CPK in the diagnosis of myocardial infarction is in doubt and that it is less sensitive than the serum GOT and LDH in this respect. Therefore, increased levels of CPK after intramuscular injections of different drugs must be taken into account in the evaluation of patients with suspected myocardial infarction or in any patient in whom this enzyme is under evaluation.

## References

1. DUKO, H., ET AL: Lancet, 1967, 2, 743.
2. ZIMMERMAN, H. J. AND ESHCHAR, Amer. J. Med. So. 253, 272, 1967.
3. HUNT, D. AND BAILIE, M. J.: Med. J. Aust., 1967, 1034.
4. MELTZER, H.: Science, 1968, 159, 1368.
5. BENNET, H. W. and BETTS. A.: J. Maine Med. Ass., 1967, 58, 214.
6. VELEZ, G. E., JARDY, P., DIOSO, M., and PERKOFF, G. T.: J. Lab. Clin. Med., 1966, 68, 636.
7. WARNOCK, D. G., and ELLMAN, G. L.: Science, 164, 726, 1969.
8. IMASHITA, H. and OHTA, Y.: Lancet, 1967, 1, 621.
9. EBASHI, S., TOYOKURA, Y., and MOMOIS, H.: J. Biochem. (Tokyo), 1959, 46, 103.
10. FLEISHER, G. A.: Clin. Chem., 1967, 13, 233.
11. SAUIGNANO, T., HANOK, A., and KUO, J.: Amer. J. Clin. Path., 1969, 51, 76.
12. VINCEST, W. R. and RAPAPORT, E.: Amer. J. Cardiol., 1965, 15, 17.

# Ventilatory Problems in Infants and Children*

J. E. MCCLENATHAN, M. D.† AND JOSEPH M. LOPRESTI, M. D.‡

INADEQUATE VENTILATION is a common problem in pediatrics. This paper will review those causes resulting from intrinsic deformity or pathology in the airway as well as secondary or extrinsic conditions. Etiology, clinical evaluation, diagnosis and therapy will be included with emphasis on available diagnostic maneuvers. Therapy will be summarized. The majority of ventilatory problems are urgent or semi-emergency in nature.[1, 2]

## Clinical Evaluation

The clinical history will establish age of onset and intermittency of symptoms and characterize the type of respiratory distress. Newborns will have severe distress from the usual type of TEF due both to the aspiration of secretions and secondarily to abdominal distention. Bochdalek hernias will cause immediate respiratory distress due to compression of the functioning lung, underdevelopment of the ipsilateral lung, and secondary visceral displacement into the thorax. The abdomen will be scaphoid.

Prematurity is often associated with the Wilson Mikety syndrome or pulmonary hyaline membrane disease.

Vascular rings and tracheomalacia usually become a problem at 10-12 weeks of age or later. Complete vascular rings may induce a "brassy" type cough which is very characteristic. In addition, a difference in blood pressure in the arms may suggest a vascular deformity. Tracheomalacia often produces mild inspiratory stridor from birth together with sternal retractions with increased respiratory effort.

Age-grouping may not help in assessing such conditions as croup, epiglottitis, lobar emphysema, pneumothorax, and cysts, since they occur in all age-groups. Foreign bodies in the airway are problems of children over 1 year of age but may be seen in much younger children.

## Diagnosis

Radiographic evaluation of the ventilatory problems in infants and children may be grouped as follows: (1) routine views of the chest, (2) fluoroscopic examination, (3) tomography, and (4) contrast studies.

**TABLE 1. Etiology**

Congenital

- A. Primary
  - Tracheomalacia
  - Tracheo-esophageal fistula
  - Tracheal hemangioma
  - Tracheal web
- B. Secondary
  - Diaphragmatic hernia and eventration
  - Vascular ring
  - Labar emphysema
  - Congenital heart lesion
  - Cystic hygroma
  - Enterogenous and bronchogenic cyst
  - Hyaline membrane disease

Acquired

- A. Primary
  - Aspiration pneumonia
  - Laryngeal polyp
  - Croup and epiglottitis
  - Tumors (thymoma, teratoma)
  - Foreign bodies
- B. Secondary
  - Pneumothorax
  - Asthma
  - Bronchiectasis
  - Pneumotocoele
  - Bacterial pneumonia

*Routine views.* PA and lateral projections are the *sine qua non* for accurate diagnosis. In the small infant the location of the trachea in the PA view will accurately localize the aortic arch. The appearance of the pulmonic changes is almost pathognomonic in hyaline membrane disease, the Wilson-Mikety syndrome, and congenital lobar emphysema (figures 1, 2 and 3). An elevation of the left main stem bronchus indicates enlargement of the left atrium.

In the lateral view the appearance and location of the air-filled trachea is of inestimable value for the diagnosis of vascular rings, and for localization of infiltrates and mediastinal masses. Pathological

---

* From the Departments of Surgery and Radiology, Children's Hospital of the District of Columbia.

† Associate Professor of Surgery, George Washington University School of Medicine, 1331 H Street, N. W., Washington, D. C.

‡ Chairman, Department of Radiology, Children's Hospital of D. C., 2125 13th Street, N. W., Washington, D. C.

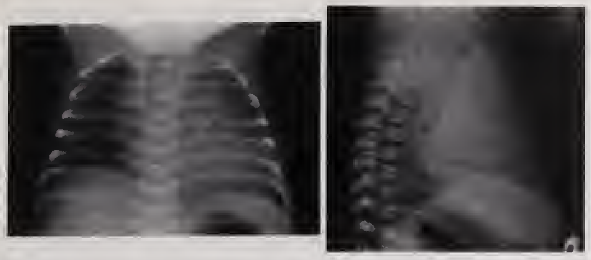


FIG 1. Premature infant with severe respiratory distress. Frontal view shows typical granular, disseminated appearance of lungs seen in hyaline-membrane disease. On the lateral film an air bronchogram is seen in the posterior basal segment (arrow).

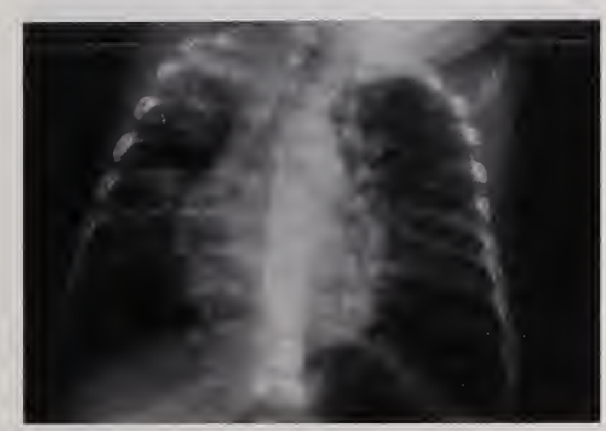


FIG 2. Premature infant with respiratory distress and acrocyanosis. Multiple cyst-like foci throughout both lungs. This change is almost pathognomic for the Wilson-Mikity syndrome.

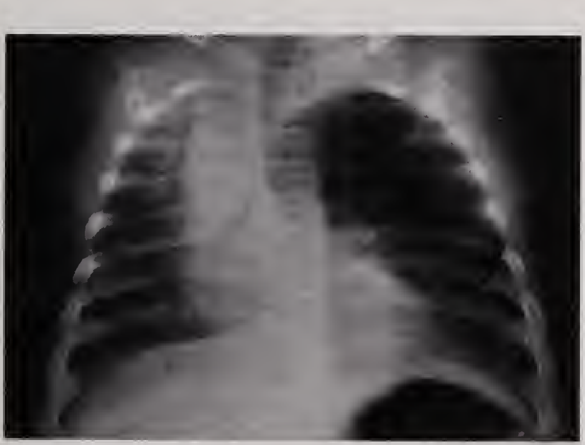


FIG 3. Radiograph in an infant with recurrent episodes of respiratory distress. Left upper lobe is hypererated with displacement of trachea and superior mediastinum to right. The fissure is depressed (arrow) and there is compression atelectasis of the right lower lobe. The changes are classical for congenital lobar emphysema of the left upper lobe.

anterior mediastinal masses in infants will displace the trachea posteriorly, a change not produced by the normal thymus (figure 4). An anterior indentation in the trachea is often seen in a double aortic arch. Infiltrates in the posterior basal segments are best seen in the lateral projection.

Oblique views will help in accurate location of mediastinal tumors. When the barium-filled esophagus is utilized, along with frontal, lateral, and oblique views, specific cardiac enlargement may be assessed.

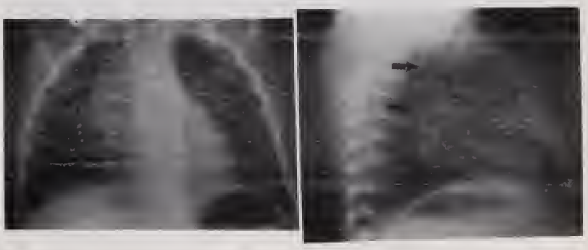


FIG 4. In frontal projection there is a "sail" sign on the right produced by the right lobe of the thymus. In lateral view trachea (arrows) is not displaced by anteriorly located normal thymus. This finding is of value in differentiating normal thymus from anterior mediastinal tumors.

*Fluoroscopy.* In pediatric patients image intensification is always employed. The value of fluoroscopy alone in evaluation of these problems is limited. Paradoxical mediastinal shift and limited motion of a diaphragmatic leaflet will confirm the presence of an aspirated non-opaque foreign body. Fluoroscopic monitoring is always used when contrast studies of the esophagus or tracheobronchial tree are performed.

*Tomography.* tomographic cuts are not often made in infants and children. They sometimes help in the differentiation and location of mediastinal masses.

*Contrast Studies.* these include esophagrams, tracheograms, and bronchograms. Esophagrams will aid in the diagnosis of esophageal atresia, the "H" type of tracheo-esophageal fistula, non-opaque foreign bodies in the esophagus, mediastinal masses, and congenital vascular rings (figure 5). The esophagus has a characteristic appearance when it is indented by an aberrant right subclavian artery. Some bronchogenic cysts in the small infant will be sandwiched between the trachea and esophagus (figure 6).

Tracheogram contrast studies with image intensification and video monitoring are essential to establish a diagnosis of tracheomalacia. Tracheograms can be useful in determining the specific type of congenital vascular ring. Occasionally an "H" type tracheo-esophageal fistula can be demonstrated only by this study.

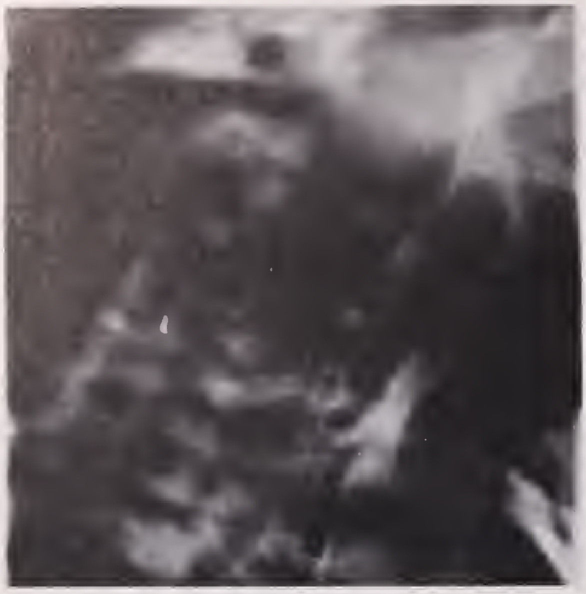


FIG 5. Esophagram showing an "H" tracheo-esophageal fistula (arrow) in an infant who had recurrent episodes of bronchopneumonia and a persistently distended abdomen. Note location of fistula above level of clavicle.

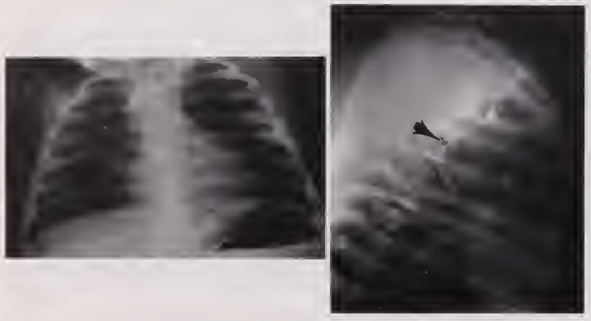


FIG 6. Esophagram in infant with respiratory distress and dysphagia. Frontal projection shows esophagus displaced to right by a superior mediastinal mass. In lateral view mass is sandwiched between trachea and esophagus (arrows). The changes are diagnostic of a bronchogenic cyst.

In the pediatric patient bronchography is performed with fluoroscopic monitoring and general anesthesia. The diagnosis of bronchiectasis can be ascertained only with a bronchogram. At times bronchography is needed to make a diagnosis of congenital lobar emphysema (figure 7).

In general, visualization of the cardiovascular structures by angiograms is limited to the evaluation of congenital cardiovascular lesions. Cine radiography is perhaps the most accurate of the studies performed on such patients.

In summary, a "bird's-eye" view of the radiologic aids in the diagnosis of ventilatory problems of infants and children has been made. The selection of a study or combination of studies to be employed will be dictated by the clinical features in the individual patient, e.g., a combination of recurrent pneumonia and a persistently distended abdomen in an infant indicates an "H" type tracheo-esophageal fistula (TEF). In such a patient an esophagram and possibly a tracheogram will be needed.

Surgical diagnostic maneuvers which may also be therapeutic include bronchoscopy under general anesthesia, direct laryngoscopy, thoracentesis, and careful blood-gas analysis. The successful emergency placement of an endotracheal tube may also confirm that laryngeal or epiglottic obstruction was present.

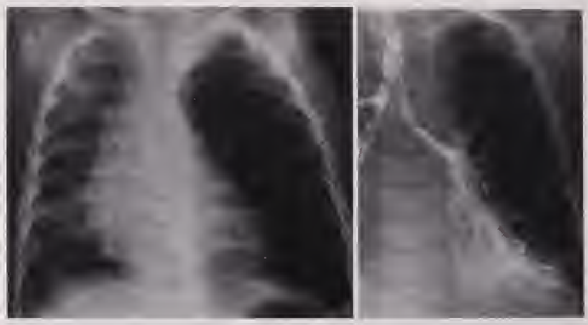


FIG. 7. Films of infant with recurrent episodes of respiratory difficulty. Frontal view shows what appears to be a hyperaerated left lung. Bronchogram demonstrates compression atelectasis of left lower lobe and delineates that hyperaeration is limited to left upper lobe. Diagnosis of congenital lobar emphysema of left upper lobe has thus been established.

Bronchoscopy is necessary for visualization of the trachea and permits identification of such lesions as foreign bodies, vascular rings, laryngo-tracheo-malacia and TEF, although it is seldom needed for the latter unless of the "H" type. It will also identify the extrinsic compression and displacement due to cystic lesions and tumors. Lobar emphysema is usually of such an emergency nature and distorts the remaining bronchial orifices that bronchoscopy is seldom of help except to rule out the presence of a foreign body.

Esophagoscopy should also be performed in cases of extrinsic displacement or obstruction of the trachea.

## Hospital Course

Clinical decisions for specific measures should be based on the history and clinical evaluation. Prompt establishment of an airway is the emergency course of action. If symptoms are not severe the work-up should be completed in 1 day.

In an emergency, direct laryngoscopy and endotracheal intubation should be carried out. Ideally, a size 16 tube or larger should be used because #12 and #14 tubes are difficult to suction and occlude easily and quickly. In addition, they permit inspissated mucous plugs to be dislodged distally during suctioning only to obstruct the tube in expiration. If #12 or #14 tubes are necessary, we believe they should be changed every 12 hours or oftener.

Tracheostomy should be done only with an endotracheal tube in place and under general anesthesia. One should utilize the largest tube the trachea will accommodate and "short" tubes offer advantages in the average child in that they do not extend into the right bronchus. Recent developments of newer composition tracheostomy tubes seem to offer little in the emergency situation but distinct advantages in the elective long-term situations, due primarily to better tissue tolerance.

When the airway has been established one may then have to decide for or against ventilatory support. Our preference in infants is the Bournes Pediatric ventilator although certain situations may require the Bird-type pressure-controlled respirator.

Specific therapy of common ventilatory problems is well-established and summarized as follows:

Primary congenital problems such as tracheomalacia and laryngeal or tracheal hemangiomas require meticulous and frequent evaluation. Time and growth of the airway will suffice for the former; the latter regress spontaneously.

Congenital tracheo-esophageal fistulae and webs should be surgically repaired.

Lobar emphysema and Bochdalek-type diaphragmatic hernias are true surgical emergencies, and their surgical correction has been well described. Usually less urgent surgical correction is indicated for vascular rings, cardiac lesions, and the congenital cystic lesions of the mediastinum.

The surgical treatment of obstructing tumors or laryngeal polyps is removal without delay. Foreign bodies in the airway demand prompt bronchoscopic observation and removal. Croup and epiglottitis require specific antibiotic therapy together with high humidity and oxygen and often the judicious administration of cortisone. Mandatory continuous observation is required for such problems, and tracheostomy may be required.

Aspiration pneumonia is a very difficult condition for which to summarize treatment. In general we recommend local measures such as tracheobronchial aspirations and intubation with supported ventilation. Systemic therapy to minimize chemical pneumonitis includes use of cortisone and antibiotics to control secondary infections.[3]

Pneumothorax in the newborn, secondary to hyaline membrane disease or spontaneous, may be observed if small, but large accumulations of air or tension require "water seal" drainage.

Pneumatocoeles which trap air and are expanding may require removal surgically or tube drainage, but this is a rare situation.

Specific antibacterial measures are indicated for pneumonias. Postural drainage, antibiotics and physiotherapy will control 85–90% of acquired bronchiectasis in children. Surgery is indicated if the involved segment fails to heal under good medical control and is the source of repeated infection.

Control of asthma is medical, but an occasional patient in status asthmaticus will benefit from general anesthesia, bronchoscopic cleansing of the airway, endotracheal intubation, and ventilatory support. Use of ventilators for any of these conditions requires close blood-gas monitoring.

## References

1. GANS, S. L., HUCKWORTH, L. E.: Respiratory obstructions of surgical importance. Ped. Clin. N. Amer., 1959, 6, 1023.
2. HATCHER, C. R., JR., LOGAN, W. D. AND ABBOTT, O. A.: The management of acute airway problems in infants and children. Dis. Chest, 1966, 49, 517.
3. LAWSON, D. W., DEFALCO, A. J., PHELPS, J. E., BRADLEY, D. E., AND MCCLENATHAN, J. E.: Corticosteroids as treatment for aspiration of gastric contents. Surgery, 1966, 59, 845.

# Utilization of Side-Effects Through Molecular Manipulation*†

FREDERICK W. WOLFF, JUAN BASABE, ALLISON GRANT, STEPHEN KREES, NESTOR LOPEZ, AND JOSEF VIKTORA

THE ORAL DIURETICS, thiazides, phthalimidines, furosemide, ethacrynic acid and others are now widely used. The thiazides were used at first for the treatment of congestive heart failure, but they and other diuretics are now the first choice in the treatment of hypertension. In 1961 some 30,000,000 prescriptions for diuretics were issued in the United States.[1] At a conservative estimate, the average prescription was for 14 days and the average number of pills 3 per day. Following this calculation it is most likely that in 1961 more than 1.5 billion of diuretic tablets were prescribed in the United States alone.

Long-term controlled clinical trials have revealed the hyperglycemic and possible diabetogenic side-effects of benzothiadiazines and phthalimidines in hypertensive patients.[2] Both clinical reports and pharmacologic experimentation have demonstrated the hyperglycemic effect of many other non-thiazide diuretics in laboratory animals.[3]

Diazoxide, the desulfamoylated analog of chlorothiazide, has marked hypotensive, antidiuretic and hyperglycemic effects.[4-6] Its hyperglycemic activity has been utilized satisfactorily for the treatment of intractable chronic hypoglycemia in patients suffering from such diverse conditions as inoperable islet-cell tumors. leucine-sensitive hypoglycemia, and others.[7-9]

Diazoxide is comparatively short-acting. In order to produce a long-acting hyperglycemic compound the long-acting phthalimidine diuretic Hygroton was desulfamoylated and tested in our laboratory (figure 1). The results demonstrate that this compound, C3/76, is a long-acting hypotensive, anti-diuretic, and hyperglycemic agent (figures 2 and 3). Similar effects were obtained on desulfamoylation of related diuretics.[10] Structural changes performed on these desulfamoylated compounds permitted varying degrees of separation of biological effects.

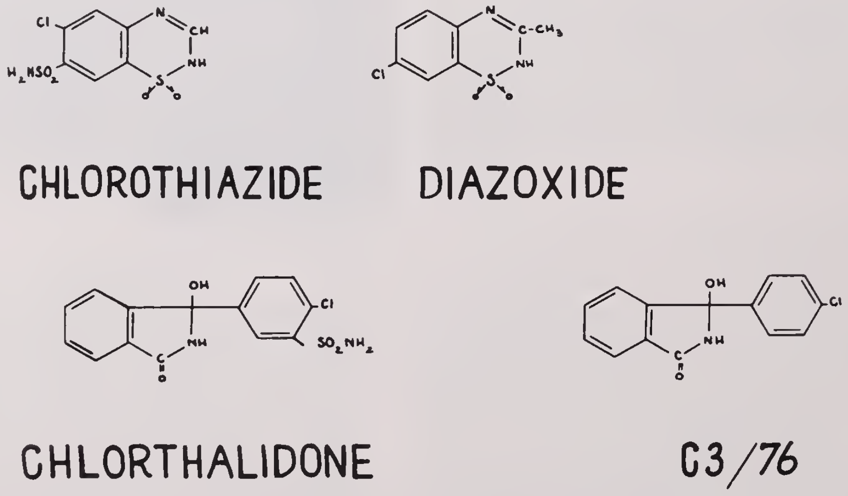


FIG. 1. Structural formulae of Chlorothiazide conversion to diazoxide and Chlorthalidone to C3/76.

Another analog studied, A025, is demethylated diazoxide (figure 4). In the rat it is less toxic and almost as hyperglycemic as diazoxide (figure 5). In the water-loaded rat it did not show the antidiuretic effects of diazoxide (figure 6). In the Rhesus monkey

---

* From the Research Foundation of the Washington Hospital Center and the Division of Clinical Pharmacology, Department of Medicine, George Washington University School of Medicine, 1331 H Street, N. W., Washington, D. C.

† Supported by the Research Foundation of the Washington Hospital Center, 110 Irving Street, N. W., Washington, D. C., 20010 and N. I. H. Grant No. 5 RO1 HE-10102-04; the Women's Auxiliary of the Washington Hospital Center; a Travel Grant from the World Health Organization; and a Training Grant in Clinical Pharmacology from the University of Los Andes, Venezuela.

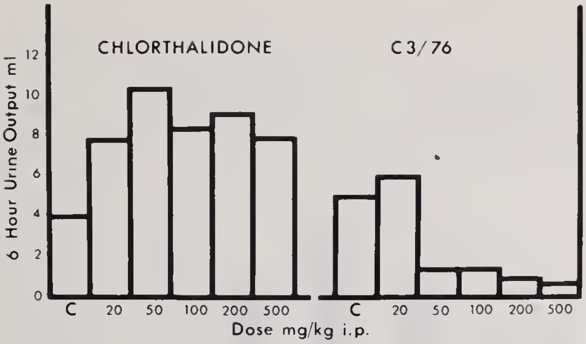


Fig. 2.

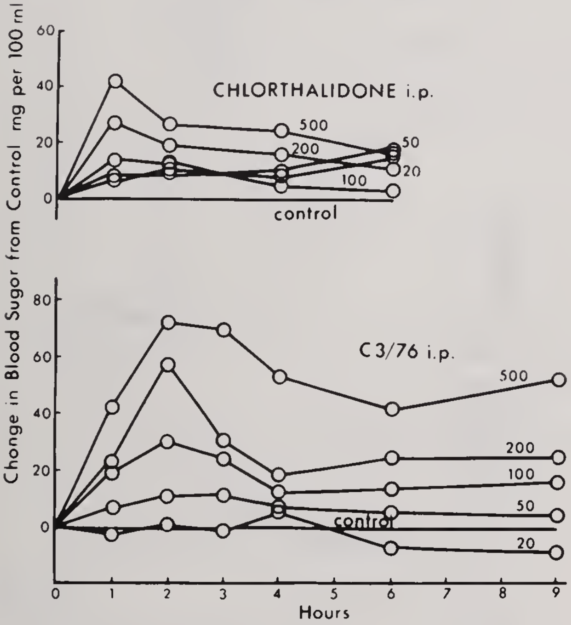


FIG. 2. and FIG. 3. Demonstration of antidiuretic and enhanced hyperglycemic effect of C3/76 compared with Chlorthalidone. Ten rats at each dose level.

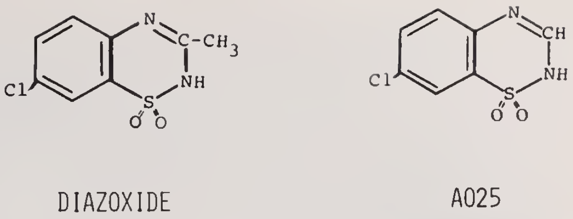


FIG. 4. Derivation of A025 from diazoxide. Hyperglycemic effects of diazoxide and A025. Ten rats at each dose level.

A025 at a dose of 50 mg/kg i.v. is hyperglycemic, lowers the blood pressure only slightly, reduces plasma insulin levels, and is not anti-diuretic. At a dose of 100 mg/kg AO25 is markedly hyperglycemic and lowers the blood pressure moderately but causes an apparent increase in urine output (figures 7 and 8).

Other similar compounds synthesized in our laboratories are primarily inhibitors of insulin secretion, as established by pancreas incubation and perfusion experiments. For example, the oral administration of AO25 to rats at a dose of 100 mg/kg daily for 6 weeks led to daily hyperglycemia. When the dosage was discontinued 16 hours prior to a pancreatic perfusion experiment, a massive release of insulin was obtained, compared to pancreas preparations obtained from control animals. This suggests that insulin synthesis had continued throughout the 6 weeks while release was being inhibited by AO25 (figure 9). The more intimate nature of the observed suppression of insulin release from pancreatic islet cells by these agents is not yet fully elucidated.

The mode of action of diazoxide-induced hyperglycemia has been investigated in detail.[11-14]

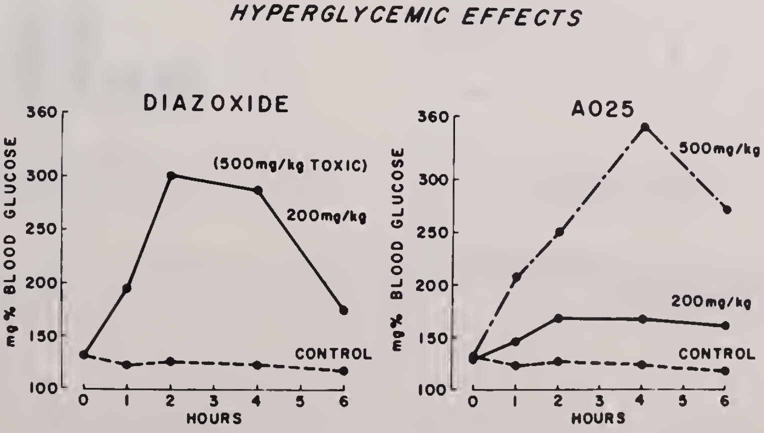


FIG. 5. Derivation of A025. Two rats per cage and 6 rats per dose level.

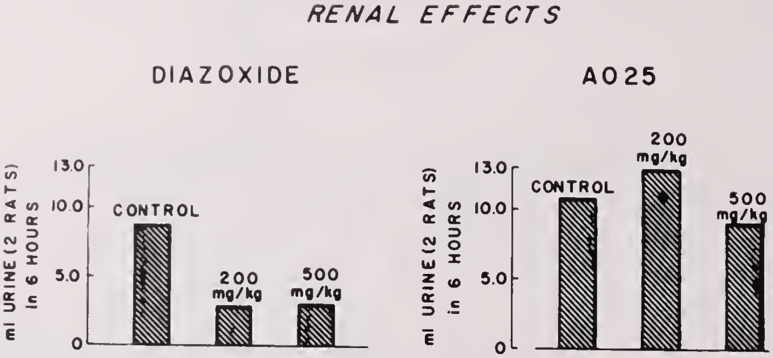


FIG. 6. Renal effects of diazoxide and A025. Two rats per cage and 6 rats per dose level.

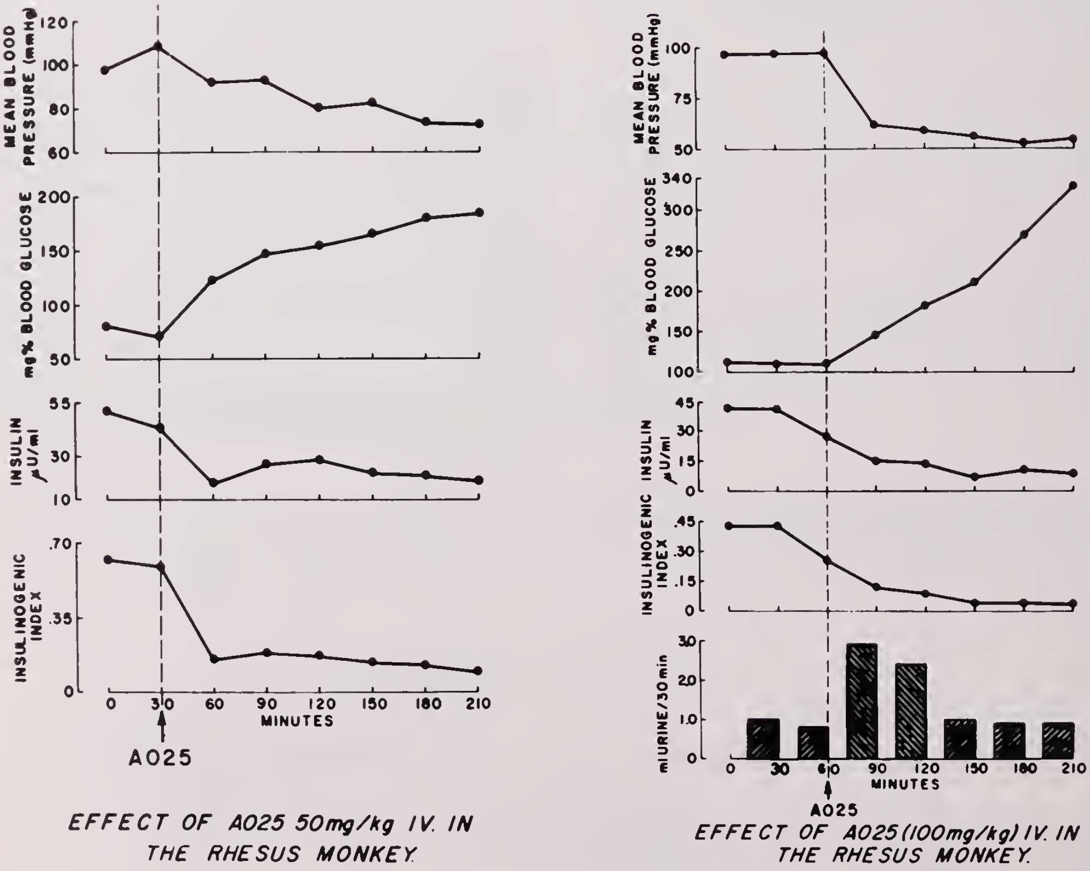


FIG. 7. and FIG. 8. Effect of 50 and 100 mg/kg I. V. in the Rhesus monkey. Mean values obtained from 3 animals at 50 mg/kg and 2 animals at 100 mg/kg.

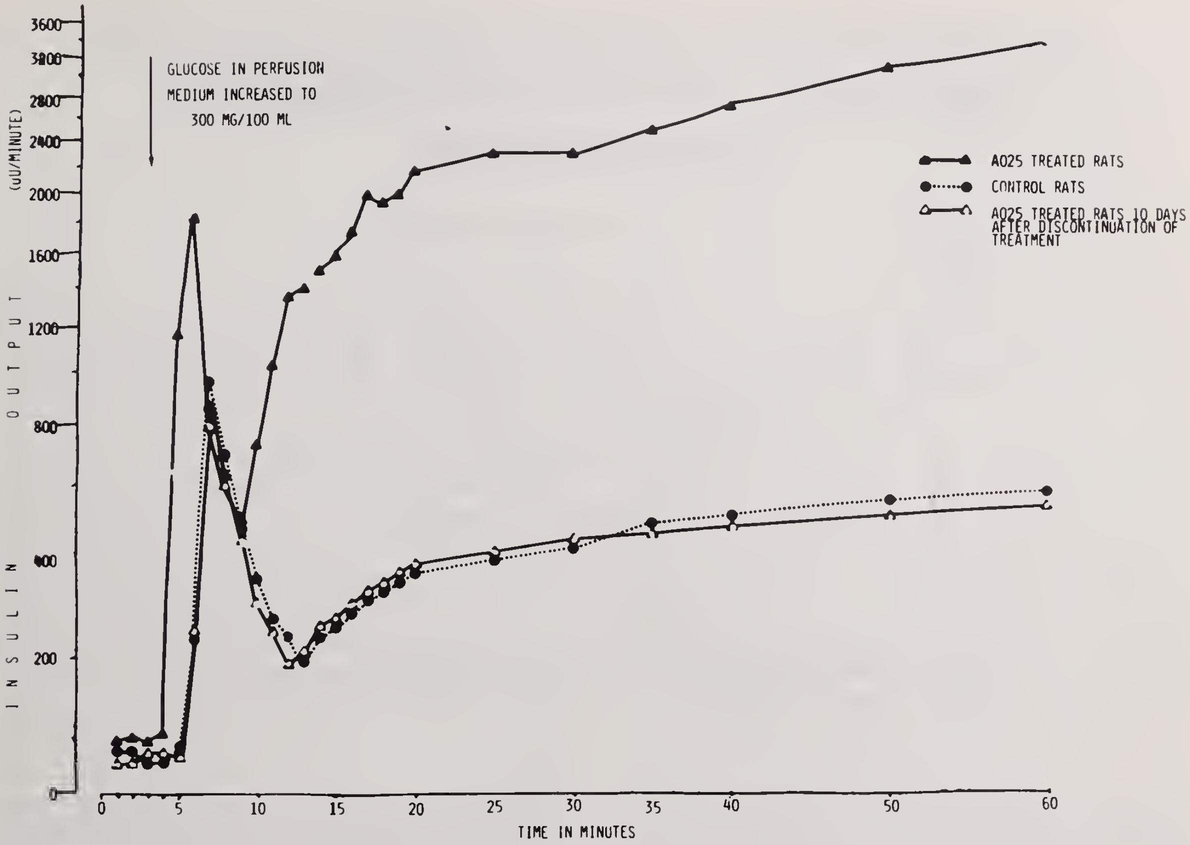


**FIG. 9. Pancreatic perfusion with glucose in rats after chronic pre-treatment with A025.**

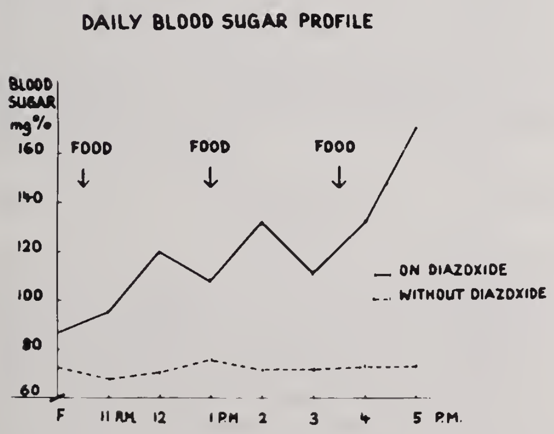


**FIG. 10. Utilization of diazoxide in an adult with an islet-cell tumor and in a child with leucine-sensitive hypoglycemia.**

In man it appears primarily due to an inhibition of insulin secretion. In experimental animals the cause of the hyperglycemic activity is related to the experimental conditions, dose, and mode of administration. If marked hypotension results from the administration of the drug there is evidence of coincident hyperglycemia and catecholamine release.[15] Catecholamines have been shown to have direct depressant action on insulin secretion.[16]

Inhibition of insulin secretion by drugs provides therapy for intractable hypoglycemia in patients with malignant insulinomas, metabolic defects in the newborn and young infants, and similar causes of chronic hypoglycemia. It also provides a new tool for the study of insulin secretion and may suggest another etiologic factor for diabetes mellitus.

Diazoxide is the only insulin-inhibiting compound given to man so far, because the more recently synthesized compounds lack sufficient toxicologic testing required by the F.D.A. The pharmaceutical companies, capable of performing the detailed and exhaustive subacute and chronic toxicity tests, lack interest in these compounds, clearly because of the limited clinical application and economic gain to be obtained from the new drugs. Diazoxide has been used relatively satisfactorily in the treatment of islet-cell tumors and leucine-sensitive hypoglycemia (figures 10 and 11), but its shortness of action and anti-diuretic activity would make the new compounds preferable.

Our studies provide an example of the team-work required in a clinical pharmacology unit, investigating the possible utilization of side-effects through

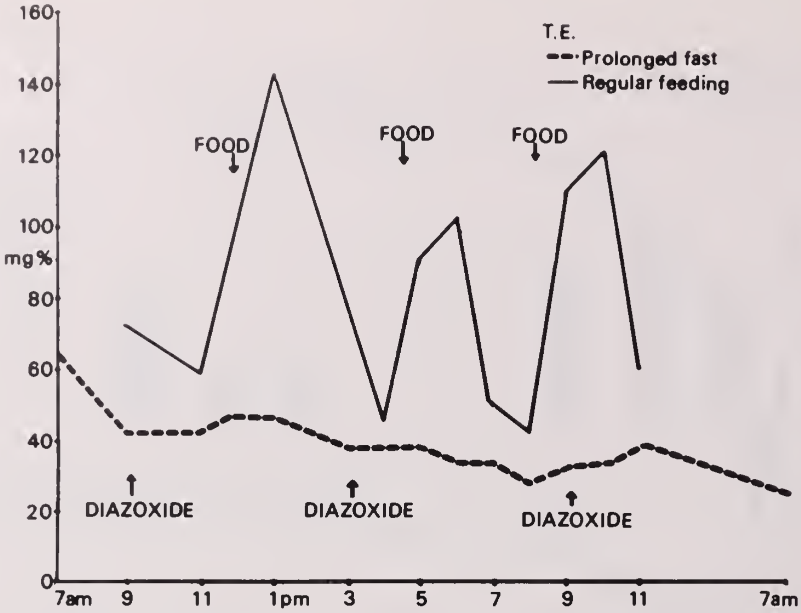


FIG. 11. Utilization of diazoxide in an adult with an islet-cell tumor and in a child with leucine-sensitive hypoglycemia.

molecular manipulation. It is a multi-disciplinary study quite commonly found in the large pharmaceutical commercial laboratories, but not as yet frequently practiced within an academic environment. It provides a training facility for young physicians and scientists who wish to gain an understanding of the need for the team approach that makes progress in therapeutics possible.

## References

1. "New Medical Material," in Hearings, Sub-Committee on reorganization and International Organization. U. S. Senate, August 1 & 9, 1962; Part 2, April 1962, p. 26.
2. WOLFF, F. W., PARMLEY, W. W., WHITE, K., and OKUN, R.: J.A.M.A., 1963, 185, 568.
3. WALES, J. K., GRANT, A. M., and WOLFF, F. W.: J. Pharmacol. Exp. Ther., 1968, 159, 229.
4. WOLFF, F. W., and PARMLEY, W. W.: Lancet, 1963, 2, 69.
5. WALES, J., and WOLFF, F. W.: Lancet, 1967, 1, 53.
6. WILSON, W. R., and OKUN, R.: Circulation, 1963, 28, 89.
7. DRASH, A., and WOLFF, F. W.: Metabolism, 1964, 23, 487.
8. WOLFF, F. W.: in Handbook of Diabetes Mellitus. Brooklyn, New York: Lehmann Co., 1968, Part I, p. 867.
9. WALES, J. K., SPECHTMEYER, H., VIKTORA, J. K., and WOLFF, F. W.: Med. Ann. D. C., 1968, 37, 460.
10. WALES, J. K., ET AL: J. Pharmacol. Exp. Ther., 1968, 164, 421.
11. WOLFF, F. W., ET AL: Diabetes, 1963, 12, 335.
12. WOLFF, F. W., and PARMLEY, W. W.: Diabetes, 1964, 13, 115.
13. STAQUET, M. J., NABWANGU, J., and WOLFF, F. W.: Metabolism, 1965, 14, 1307.
14. YABO, R., VIKTORA, J. K., STAQUET, M. J., and WOLFF, F. W.: Diabetes, 1965, 14, 591.
15. STAQUET, M. J., YABO, R., VIKTORA, J., and WOLFF, F. W.: Metabolism, 1965, 14, 1000.
16. WOLFF, F. W., HIRSCH, E., WALES, J., and VIKTORA, J. K.: N. Y. Acad. Sci., 1968, 150, 429.

# Recognition of the Syndrome of Post-Traumatic Pulmonary Insufficiency in a Patient with Severe Trauma

MAURICE J. CASEY, M.D., F.A.C.S.*

ADVANCES IN MEDICINE OVER THE YEARS have enabled us to prolong life and health in the case of severe trauma and to enable many patients to survive who might not have done so. As recent advances in our knowledge and ability have enabled severely traumatized patients to live longer, new syndromes have come to light presenting challenges to those involved in the treatment of trauma. Some years ago the most common cause of death from severe trauma was shock, but with the advent of blood transfusions and adequate fluid replacement it is now uncommon to find a patient dying primarily from shock. If the patient survived the initial shock period with appropriate therapy the next problem that came to light was that of acute renal insufficiency. This was a great cause of death in patients who survived the shock period at the time of the Korean War. However, with the advent of more knowledge and experience in this field and the use of the artificial kidney this has markedly decreased as a cause of death. Severely traumatized patients now are surviving longer, and the most recent syndrome brought to light is an unusual progressive and lethal form of respiratory failure. The following patient exhibits this syndrome.

## Report of Case

An 18-year-old white man was admitted to Sibley Memorial Hospital on June 22, 1969 following a high-speed automobile accident. The automobile in which he was driving struck a stone wall at what was estimated to be approximately 100 miles per hour. At the time of his accident he sustained multiple injuries, including head injuries, abdominal injuries, and multiple fractures including a fracture of the midshaft of the left femur and the pelvis. All ribs were intact; there was no hemothorax or pneumothorax. He was in deep shock and was resuscitated with whole blood and Ringer's lactate with a return of blood pressure to normal levels. Chest X-ray films taken were normal. The fractures were immobilized. The patient was admitted to the Intensive Care Unit with all vital signs stable on June 22, 1969. He was then conscious and alert with all vital signs stable and with an adequate urinary output. He did not appear to be in any respiratory difficulty.

In the next 24-hour period, however, he developed acute renal insufficiency, and his respiratory rate began to increase with no increase in fluid intravenously. Because of the renal insufficiency the decision was made to transfer him to Georgetown University Hospital for possible dialysis. However, during the next 12-hour period, prior to actual transfer, his respiratory rate began gradually to climb to 55 per minute. Blood gases at Sibley Memorial Hospital showed a severe hypoxemia with a $PO_2$ of 42. He was given nasal oxygen, transferred to Georgetown Univeristy Hospital where the $PO_2$ was repeated and found to be essentially unchanged. At this time the $PCO_2$ was 26 mm Hg and the arterial PH 7.52. The patient was semicomatose and barely responsive. Tracheostomy was performed, and the patient was put on a respirator with a 100% oxygen. On a positive-pressure respirator with 100% oxygen the highest arterial oxygen concentration was 67mm of Hg. The renal insufficiency was controlled by dialysis, the fractures were easily controlled by traction, and the blood pressure was controlled by fluid and blood, but the patient became gradually comatose despite multiple changes in the oxygen concentration of the respirator. Curare and morphine were used, and many attempts were made to keep the patient at low oxygen concentrations which were unsuccessful. He gradually became more hypoxemic despite treatment and died on July 1, 1969.

At postmortem he had a small brain contusion, no thoracic trauma, no rib fractures, a mild contusion of the right lobe of the liver, a contusion of the right kidney with some blood loss, and a fracture of the left femur, and multiple pelvic fractures. Microscopic examination of the kidney showed a typical shock kidney with no unusual aspects. Microscopic examination of the lungs, however, showed interstitial edema, alveolar-cell hypertrophy, and a hyaline membrane. No fluid was present in the alveolar sacs.

This patient demonstrates a syndrome of post-traumatic, pulmonary insufficiency and exhibits the classical 4 stages described by Moore et al:[1]

Phase 1. The phase of injury, resuscitation, and alkalosis is the first 12-hour period at the time of admission to Sibley at which time the patient was in deep shock characterized by a low flow state.[1,2] Examination of the lungs revealed no rales. He was resuscitated and entered phase 2.

---

* Assistant Professor of Surgery, Georgetown University School of Medicine, Washington, D. C.; Address: Sibley Memorial Hospital, 5255 Loughboro Road, N. W., Washington, D. C. 20016.

Phase 2. The period of circulatory stabilization and beginning respiratory difficulty. This very short phase was the early time in the Intensive Care Unit at Sibley at which time the patient had stable vital signs, an intact sensorium, and only a very slight increase in the respiratory rate. At this point the patient began to show some ominous signs which required the use of blood to maintain the blood pressure after all apparent bleeding had ceased and spontaneous hyperventilation with hypocarbia and acute renal insufficiency. The respiratory rate began to climb and reached 55 per minute. At this time these factors would suggest that this patient was going into the third phase of the syndrome of post-traumatic pulmonary insufficiency.

Phase 3. During the phase of progressive pulmonary insufficiency the patient exhibited the full-blown syndrome. It is during phase 3 that auscultation reveals rales, scattered over both lung fields. X-ray films of the chest reveal infiltrates of a spotty and diffuse nature. More tracheal secretions are produced, and the patient must be suctioned more frequently.[3] Blood pH during this time is maintained at normal or close to normal limits, but satisfactory $PO_2$ is maintained only at increasing levels of oxygen concentration in the inspired mixture. The oxygen itself is toxic, and multiple attempts are made to remove the patient from respiratory assistance and supplementary oxygenation. Inability to remove the patient from the respirator and from the high oxygen concentrations is extremely ominous. The patient gradually became progressively unable to maintain spontaneous ventilation. Later on bacterial invasion of the tracheal-bronchial tree occurs. If broad-spectrum antibiotics are used to cut down on infection, resistant growth will appear or *Candida albicans.* This is the period of variable length, usually lasting several days until the patient enters the final phase.

Phase 4. This is the phase of terminal hypoxia, hypocarbia and asystole. At autopsy the lungs are found to be heavy and stiff with interstitial edema and interstitial hemorrhage, hyperplasia and hypertrophy of the alveolar lining cells. Fibrinous deposits forming a hyaline membrane appear on the walls of the alveoli.[1,4] Atelectasis if present is usually extremely minimal.

## Discussion

The major problem with these patients is alveolar arterial oxygen gradient and pulmonary shunting, essentially inability of the delivered oxygen in the alveolar sac to enter the blood stream despite the concentration or pressure of oxygen in the alveoli. The pathogenesis of this is somewhat debatable but is undoubtedly related to the low flow state secondary to the injury.[1,3,4] There are multiple other complicating factors which are also involved. The interstitial edema, the alveolar-cell hypertrophy, and the formation of a hyaline-type membrane in the alveoli prevent the interchange of oxygen from the alveolar sac into the blood stream. It should be noted that high oxygen concentrations also will produce this hyaline-type membrane and the alveolar capillary block.[5]

Another factor that is detrimental to the patient is that some capillaries are actually obstructed by pieces of bone marrow, and these are readily demonstrable on a microscope slide at postmortem.[6] True fat embolization with a biochemical change and deposition of the fat in the tissues is also present since most patients with multiple injuries have fractures. This is contributory to the syndrome but is not the sole cause of the hypoxemia.

Fragments of blood products secondary to the blood transfusions have been implicated as another factor in this syndrome.[6] Degenerating blood cells and platelet aggregates from transfusions of bank blood are frequently found in the capillaries of the lungs after massive transfusion—always in those transfusions given without filtration. Even with filtration, when more than 3 units of blood are given through a single filter, many of these fragments will pass through the filter and be deposited in the capillaries of the lungs. A more recently implicated additional factor is the increase in the use of large volumes of lactated Ringer's solution, which of course contains no colloid. The resulting hypoproteinemia has been implicated by some investigators as the cause of the interstitial edema but this is debateable.

The treatment that is generally used is sufficient oxygen with a mechanical ventilator to give adequate arterial saturation.[6] In the treatment of these patients when the hypoxemia is discovered 100% oxygen is used as a test dose for 30 minutes. Unfortunately, because of the alveolar capillary block, there is a disappointingly small rise in the arterial oxygen saturation. For example, changing from 40% oxygen to 100% oxygen may only raise the arterial $PO_2$ 20-30 mm Hg. The high oxygen concentrations over a protracted period that is needed in these patients produces toxicity. Attempts to wean the patient off the high oxygen concentrations are generally unsuccessful and the patient progresses to fatal results.

Part of the treatment with the respirator requires endotracheal intubation or tracheostomy, either of which allows introduction of bacteria into the pulmonary tree. After a few days these invariably become infected, and the additional factor of bacteria contributes to the fatal results despite broad-spectrum antibiotics which seem to be more of a detriment than a help.

The treatment of these patients is quite complicated, but all observers agree that the initial low flow state is the common denominator for fatal results. Resuscitation as rapidly as possible with return of the vital signs and adequate tissue perfusion will certainly prevent some of these patients from entering this lethal complication. It should be noted that the adequacy of ventilation can not be estimated by physical examination alone, and blood gases including $PCO_2$, $PO_2$ and pH are necessary for not only the recognition but also the management of this problem.[1] Because of the high and inefficient respiratory rate, mechanical ventilation with a volume or pressure sensitive mechanical respirator is used and the patient is treated with oxygen.[1,5] Oxygen concentration should be kept as low as possible to maintain the patient, since the treatment with high concentrations of oxygen have a very adverse effect on the lung structure. Sterile techniques should of course be used in handling the tracheostomy to prevent the introduction of bacteria.

In summary, this is a recently recognized syndrome that occurs in the severely traumatized patients which has come to light because of the increased efforts at resuscitation and the ability to handle secondary complications such as acute renal insufficiency, which have enabled severely injured patients to survive longer. The clinician is now faced with a new syndrome with a high incidence of fatal results. Further research and experience into the recognition and management of the patient with this complication will enable us to save some patients who are not salvageable at this time.

## References

1. MOORE, F. D., ET AL: Post-traumatic pulmonary insufficiency. Philadelphia: Saunders Co., 1969, p. 99.
2. SIMMONS, R. L., CAPT., M. C., USAR., ET AL: Respiratory Insufficiency in Combat Casualties, III Arterial Hypoxemia after Wounding. Ann. Surg., 1969, 170, 53.
3. SIMMONS, R. L., CAPT., M. C., USAR, ET AL: Respiratory Insufficiency in Combat Casualties. IV Hypoxemia during Convalescence. Ann Surg., 1969, 170, 53.
4. BLAISDELL, F. W., LIM, R. C., JR., STALLONE, R. J.: Mechanism of Pulmonary Damage following traumatic shock. Surg. Gynec. Obstet., 1970, 130, 15.
5. GUTIERREZ, V. S., MAJ., M. C., ET AL: Relationship of Hypoproteinemia and Prolonged mechanical ventilation of the development of pulmonary insufficiency in Shock. Ann. Surg., 1970, 171, 383.
6. MOSELY, R. V., AND DOTY, D. B.: Death Associated with Multiple Pulmonary Emboli, soon after Battle Injury. Ann. Surg., 1970, 171, 336.
7. MILLER, W. W., WALDHAUSEN, J., AND RASHKIND, W. J.: Oxygen poisoning of the Lung in Acyanotic Dogs. New Eng. J. Med., 1970, 282, 943.
8. MARTIN, A. M. JR., CAPT, M. C., ET AL: Respiratory Insufficiency in Combat Casualties, I Pathologic changes in the lungs of patients dying of wounds. Ann. Surg., 1969, 170, 30.

# Dyspnea, Fever, and Anasarca in a 39-Year-Old Woman; A Clinicopathologic Conference*

CHANDLER SMITH, M.D.†

THE FOLLOWING CASE report was presented for discussion at the biweekly Clinicopathologic Conference held at George Washington University Hospital, December 17, 1968.

The patient was a Negro woman, 39 years old, who was admitted to the hospital because of shortness of breath and widespread subcutaneous edema.

She had been well until 7 weeks previously when fever, cough, and shortness of breath developed. The cough was productive of yellow sputum. She was treated, failed to improve, and was admitted to another hospital 3 weeks after the onset of this illness with a diagnosis of bronchopneumonia. Antibiotic therapy was given, and her condition improved in 2 days. However, weakness and anorexia developed shortly thereafter. In addition, the shortness of breath recurred, and swelling of the ankles was first noted. The latter became progressively worse and she then noted enlargement of her abdomen which became pronounced. The widespread edema persisted, with regression from time to time, but massive anasarca always recurred. The shortness of breath became severe. Mild chest pain over the precordium was also noted and this seemed to be increased by respiration. She had not had shaking chills, high fever, or palpitations. Four thoracenteses for recurrent bilateral pleural effusions were performed, and cultures of these were negative. She was digitalized and given Coumadin for thrombophlebitis which developed in the right leg. After 4 weeks the patient left the hospital unimproved. She was home for 2 days during which time the edema worsened and the dyspnea became more pronounced. She then consulted another physician and was admitted to The George Washington University Hospital.

The patient had not been seriously ill prior to the present illness. There was no history of rheumatic fever, heart disease or renal disease. There had been no dizziness, headache, vomiting, constipation, diarrhea, or urinary-tract symptoms.

Review of systems was negative except for a miscarriage that occurred after taking several "Humphrey #11 pills." There was no pelvic instrumentation or medical treatment at that time which was 1 month prior to the onset of the present illness. Menstruation since then had been normal. She had not taken oral contraceptives.

She was a well-developed, markedly edematous patient in acute respiratory distress. The temperature was 98.6° F, the pulse rate 150, the respiratory rate 60, and the blood pressure 170/20 mm Hg. The skin was warm, dry and clear. The head was normal, and no retinal hemorrhages were seen. The neck was supple, and the veins were distended without pulsations. The thyroid was not enlarged. Auscultation of the chest revealed rales and diminished breath sounds from base to midcapsular level on both sides. The cardiac point of maximum impulse was in the 5th left intercostal space in the anterior axillary line. A Grade II/VI systolic ejection murmur was heard at the apex that radiated up the left sternal border. There was also a soft decrescendo diastolic murmur in the 2nd right intercostal space that did not radiate. No pericardial friction rub was heard, and no thrill was felt. The abdomen was markedly distended, and an umbilical hernia was present. The liver was tender, and the edge was palpated 8 cm. below the right costal margin. Shifting dullness was elicited; the bowel sounds were hypoactive. The spleen was not felt. The legs displayed marked pitting edema to the knees and moderate pitting edema to the groins.

The urine was normal except for a trace of albumin and numerous leukocytes and occasional granular casts in the sediment. The hemoglobin was 7.6 gm, the hematocrit was 25, and the leukocytes numbered 10,800 with 84 segmented granulocytes, 7 band cells, 8 lymphocytes, and 1 monocyte. A VDRL slide test for syphilis was non-reactive.

The serum electrolytes were normal. The blood urea nitrogen was 12 mg, the serum lactic dehydrogenase was 1,150 units, and the serum glutamic transaminase was 47 units per 100 ml. The alkaline phosphatase was 3.3 units per 100 ml. A direct Coombs' test was negative. The serum bilirubin was normal. The bone marrow revealed normoblastic hyperplasia. An electrocardiogram disclosed sinus tachycardia, poor R-wave progression in $V_1$ and $V_3$ leads, and an ST depression that was "perhaps due to ischemia, digitalis, and/or rate." A chest X-ray film revealed bitateral pleural effusions and an enlarged cardiac contour that were interpreted as consistent with congestive heart failure.

---

* Presented at The George Washington University Hospital, December 17, 1968.

† Professor of Pathology, The George Washington University School of Medicine, 1335 H Street, N.W., Washington, D. C. 20005.

The patient was in the hospital 2 days. Treatment consisted of intranasal oxygen, ethacrynic acid, digoxin, and a mercurial diuretic. The temperature ranged from 98.2° to 100.6° F., the pulse rate varied from 120 to 150 per minute, and the respiratory rate gradually decreased from 48 to 30 per minute. The blood pressure remained at 130/20 mm Hg. The patient died of respiratory failure on the 2nd hospital day.

## Clinical Discussion

Dr. Ardam:* Briefly, this is the case of a young, healthy woman who develops a short illness characterized by respiratory infection and severe congestive heart failure. Along the way she has thrombophlebitis at another hospital. Here she had a wide pulse pressure, systolic and diastolic murmurs, low-grade fever, and pleural effusions.

What might cause this?

High output failure may cause this—hypertrophy, beriberi heart disease; arteriovenous fistula, and cirrhosis may be considered, but nothing in the case suggests any of these. My main thoughts center about 4 types of disease: pulmonary embolization, pericardial disease, myocardial disease, and endocarditis.

I think pulmonary embolization could produce this picture and I think it probably does play a part. These cases have exertional dyspnea, syncope with effort, cyanosis, and precordial pain. Physical examination usually shows signs of pulmonary hypertension, that is, accentuated pulmonic sounds and characteristic electrocardiographic tracing. The murmurs here are those of aortic insufficiency, but this does not fit in as the initial cause of failure.

Pericardial disease also must be considered. Idiopathic pericarditis is usually a benign disease and usually the patient recovers. Tuberculous pericarditis can produce symptoms as in this case. Against this, however, is no mention of pulsus paradoxus. Severe anemia and aortic insufficiency with murmur cannot be explained with this diagnosis. With constrictive pericarditis there is distention of neck veins with inspiration, a sign not present here. Other causes of pericarditis, such as neoplasm, are not evident. Primary tumor of the heart does not suggest itself here. Myxoma, the most frequent primary tumor, usually is located in the left atrium. It may produce many of these symptoms such as murmurs and fever. Usually there are signs of intermittent mitral stenosis, that is, murmurs changing with position, which are missing here. The murmurs that are present are those of aortic insufficiency. When myxoma is on the right, there may be signs of tricuspid disease. Rhabdomyosarcoma of the myocardium and sarcoma of the pericardium are other primary tumors, but the findings are not those given.

We come now to myocardial disease, which on first thought is a very attractive diagnosis for this case, that is, a young woman, previously healthy, with respiratory infection followed by myocardial failure. Primary and secondary myocardial disease may be considered. Alcoholic myocardopathy, familial myocardopathy, and post-partum myocardopathy all come to mind, but none of these fits the history in this case. Scleroderma, amyloidosis, and sarcoid may produce secondary myocardopathy, but no evidence of such is given.

Primary myocardial disease does not account for aortic-valve insufficiency, although it seems to cover most of the other features. Coronary thrombosis with rupture of the interventricular septum might produce symptoms like these on admission, but this would be most unlikely in a young woman previously healthy.

Aortic insufficiency is a feature here. Three things tend to cause most cases: rheumatic fever, syphilitic aortitis, and bacterial endocarditis. Bacterial endocarditis seems to me to explain all of the symptoms and signs in this case. Predisposing factors include especially previous damage due to rheumatic or congenital disease. Dental infections and genitourinary tract infections may also precede the onset. Abortions and respiratory infections are also, of course, predisposing.

The valve lesions are destructive, and bacteria are present in the vegetations. These may throw off bacterial-fibrin masses producing emboli in brain, kidney, and spleen. An important feature is the tendency of this disease to erode valves leading to rupture. Progressive anemia, left- and right-heart failure, and embolic phenomena are conspicuous features. In such cases, however, the infection may be controlled but the valve insufficiency remain.

I think the patient had acute bacterial endocarditis of her aortic valve with rapidly progressive failure. The pulmonary symptoms were very likely due to this. I think she had marked aortic insufficiency with failure on the basis of bacterial endocarditis which caused rupture of the valve cusps.

Where did the endocarditis come from? Possibly respiratory infection, quite possibly infection following abortion. I suspect the genitourinary tract here was responsible. *Streptococcus fecalis* or Staphylococcus are the most likely organisms.

---

* Dr. Irwin Ardam, Clinical Instructor in Medicine, The George Washington University

Dr. Monroe J. Romansky:* One of the organisms most likely to produce this is enterococcus. It can affect normal valves, produce vegetations, perforate the cusps and cause classic aortic insufficiency. We have had such cases in which the infection responded to antibiotics but a year or so later the patient died of heart failure resulting from a perforated valve. I agree with Dr. Ardam that endocarditis is the best explanation for all of the features of this case–valve insufficiency, fever, anemia, and heart failure.

Dr. Ardem: My diagnosis is bacterial endocarditis of the aortic valve with rupture and fulminant heart failure.

## Pathology Discussion (Autopsy 5832)

Dr. Smith:† The autopsy examination revealed bacterial endocarditis of the aortic valve with erosion and perforation of all 3 cusps. The right pleural space contained 1,000 ml of clear pale-yellow fluid, and the left contained 750 ml. The right and left lungs were markedly edematous and weighed 775 and 600 grams, respectively. The pericardial sac contained 750 ml of reddish-brown serosanguineous fluid. The heart weighed 550 grams. The liver weighed 2,675 grams and displayed pronounced acute passive hyperemia. There was 1,500 ml of clear fluid in the peritoneum. All of these are consistent with rapidly advancing congestive heart failure.

The epicardium was roughened by many large, somewhat shaggy, brownish-gray excrescences that proved on histologic examination to be masses of fibrin undergoing organization. Cultures from the pericardial fluid revealed a scanty growth of *alpha hemolytic Streptococci.* The myocardium of the left ventricle was thick and not otherwise unusual·except for a focus of necrosis in the tip of the posterior papillary muscle. The mitral valve was not remarkable, and no rheumatic disease was seen on it or on any of the other valves.

The aortic valve revealed perforation of all cusps with a large friable vegetation attached to the right coronary cusp (figure 1). Histologic examination revealed a mass of fibrin intermingled with leukocytes and colonies of bacteria (figure 2). The pulmonic valve was normal, but the atrial surface of the tricuspid valve contained a thrombotic mass that appeared intact and bland. Sections of this disclosed fibrin and a layer of leukocytes with a clear line of delineation between them. This is of some importance, because, as you know, Angrist has suggested that vegetative endocarditis arises from bacteria implanting in fibrin masses attached to valves rather than from bacterial penetration of the tissue followed by the formation of surface vegetations.[1] It seems to me that the structure of this tricuspid lesion supports his point of view.

There was widespread hemorrhagic necrosis in the central portions of most of the hepatic lobules, and there were also recent infarcts of the kidneys and spleen. All of these are due to fulminant heart failure or embolization from the aortic vegetations.

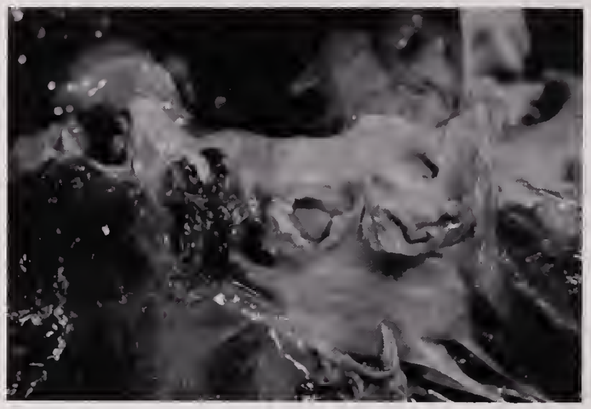


FIG. 1. Aortic valve with vegetation and perforations.

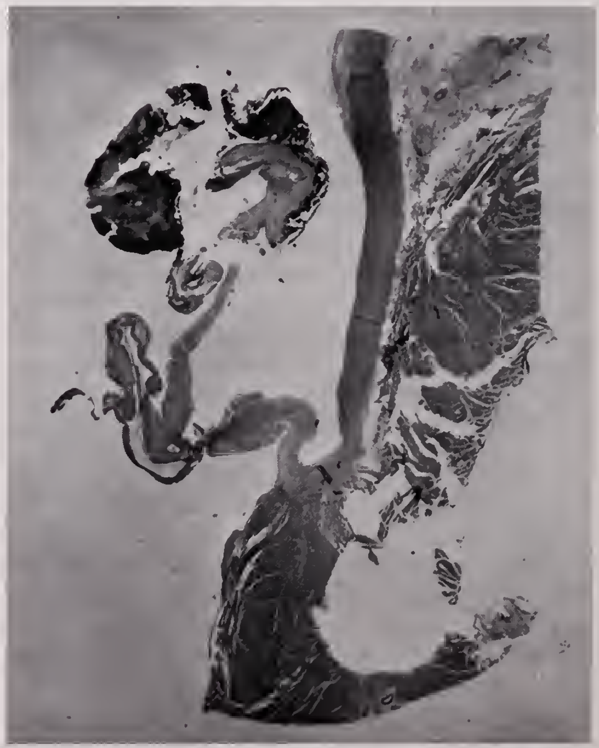


FIG. 2. Section of aortic valve with vegetation attached.

---

* Dr. Monroe J. Romansky, Professor of Medicine, The George Washington University.

† Dr. Chandler Smith, Professor of Pathology, The George Washington University.

Nothing has been said about the cause of this endocarditis, and while that question cannot be answered with certainty, it is nevertheless of interest to examine the cavity of the uterus. You recall from the record that the patient sustained an abortion about 3 months before her death. The endometrium does reveal large masses of fibrin over the surface, and sections of these disclose a rich leukocytic infiltration at the line of attachment. It is not possible to be certain that this was the source of the bacteremia that eventuated in the endocarditis, but the possibility cannot be denied, and it was the most likely site discovered by the autospsy examination.

The only specimen that yielded growth outside of the pericardium was a culture of heart blood in which enterococci were grown. It is accordingly not clear which organism was the cause of this corrosive and rapidly progressive aortic lesion.

## Anatomic Diagnoses

Bacterial endocarditis of aortic valve with perforation.
Nonbacterial thrombotic endocarditis of tricuspid valve.
Acute fibrinous and organizing pericarditis.
Pericardial effusion (750 ml).
Edema of right and left lungs.
Pleural effusions (1,000 ml, right; 750 ml, left).
Recent infarcts of kidneys and spleen.
Focal acute fibrinous endometritis.

## Reference

1. ANGRIST, A. A. AND OKA, M.: Pathogenesis of Bacterial Endocarditis. J. A. A., 1963, 183, 249.

---

**Escherichia Coli Meningitis—Scheidemandel, Campbell and Curtin**

*Continued from page 87*

CAIRNS, H., ET AL: Brit. J. Surg. (War surgery suppl.), 1947, 1, 198.
ECKER, A. D.: Lancet, 1945, 1, 176.
HUGHES, E. W. AND MANNING G. C.: Brit. Med. J., 1955, 1, 333.
KLEIN, J. O., ET AL: Amer. J. Med. Sci., 1964, 248, 640.
KLEIN, J. O., EICKHOFF, T. C., AND FINLAND, M.: Amer. J. Med. Sci., 1964, 248, 526.
MAGAREY, R., WEST, L. R., AND PELLEW, R. A. A.: Med. J. Aust., 1935, 2, 86.
MAYERS, M. M.: Urol. Cutan. Rev., 1937, 41, 16.
RICHARDSON, P. L., AND RANKING, J. M.: Brit. Med. J., 1940, 30, 743.
ROBINSON, F., LAMARCHE, J. B., AND SOLITAIRE, G.: J. Neurosurg., 1968, 28, 452.
ROSENFELD, H.: N. Y. J. Med. 1942, 42, 1490.
SPITTLE, C. R., AND PHILLIPS, B. M.: Postgrad. Med. J., 1962, 38, 162.
STALLWORTHY, K. R.: New Zeal. Med. J., 1942, 42, 165.
STRONG, P. S., AND EDWARD, J. E.: J. A. M. A., 1945, 129, 210.
TESDAL, M.: Acta Med. Scand. 1934, 83, 359.
THOMPSON, H. E., AND QUINN R. P.: J. Iowa Med. Soc., 1939, 29, 611.
WALPOLE, L.: Brit. J. Surg., 1947-1948, 35, 266.
WILSON, F. M. AND LERNER, A. M.: New Eng. J. Med., 1964, 27, 1235.
Case Records of the Massachusetts General Hospital, Case 49-1966. New Eng. J. Med., 1966, 275, 894.
Staff Conference: Meningitis and Escherichia Coli. New York J. Med., 1960, 60, 2267.

# Delayed Growth and Pubescence Associated with Primary Hepatoma

JOHN C. SEYMOUR, M.D.*

HEPATOCELLULAR CARCINOMA is 1 on a growing list of primary tumors which are associated with the ectopic production of hormones or hormone-like substances.[1] Other malignant tumors include bronchogenic carcinoma, bronchial adenoma, parotid, ovarian, adrenal, renal, colonic, pancreatic and retroperitoneal tumors. Hypoglycemia,[2] hypercalcemia,[1] polycythemia,[3,4] inappropriate antidiuresis, precocious puberty,[5] and increased secretion of growth hormone[6] have all been associated with 1 or more of these tumors. The mechanisms by which these tumors manufacture hormones is not fully understood, but it is thought that all cells in the body contain the genetic material required to produce any given hormone. Through the process of cellular differentiation the cell loses or has inhibited this multiplicity of synthetic abilities and performs only a specific function. When neoplasia occur, through whatever cause, it is possible that the cell de-differentiates its synthetic mechanisms, re-acquiring primitive abilities, and so ectopically produces hormones not usually associated with its function.

Another explanation is that with mutation the cells synthesize various polypeptides different from, but similar in structure to, a normally occurring compound, thus exerting either a functional or inhibitory effect. Yet a third possibility is that a tumor, because of its size and increased metabolic activity, rapidly utilizes substrate and thus inhibits the function of a normally occurring hormone. Such has been proposed for the hypoglycemia associated with large retroperitoneal fibrosarcomas.

Recently it has been shown that women with endometrial carcinoma have exaggerated growth hormone response to a glucose tolerance test.[7] Although the mechanism underlying this was not fully understood, it was stated that the tumor might have interfered with the hypothalamic-pituitary axis, altering growth hormone response to a naturally occurring event.

One case was reported in 1948 [8] of a 15-year-old boy with hepatocellular carcinoma, who exhibited gynecommastia, delayed growth, and pubescence. Following irradiation of the tumor he grew in stature and matured satisfactorily. The explanation for this phenomenon was not known. The following is the report of a second patient with similar symptoms of gynecomastia, delayed growth, and late pubescence associated with hepatocellular carcinoma, with reversal of symptoms following tumor extirpation.

## Report of Case

S. M. was an 18-year-old white man who was first seen in 1965 at the age of 14 years for the evaluation of gynecomastia, short stature, and lack of sexual development. Measurements included: Height, 57-½"; weight, 79 lbs; span, 57-¼". Using the growth and development charts prepared by the Iowa Child Welfare Research Station, S. M. was in the less than 3 percentile according to height and weight for his age. He was described as having a symmetrical body build. There was no facial, axillary, or pubic hair, and his voice was that of a pre-adolescent. Bilateral gynecomastia was present, each breast containing 2.5 cm of glandular tissue with no galoctorrhea. The scrotum was that of a pre-adolescent male, and both testes were descended, measuring 1 x 1-½ cm each. The remainder of the physical examination was not remarkable. A buckle smear was chromatin-negative. The impression at that time was that the patient had familial short stature with delayed adolescence.

During the following year there was little change in physical appearance, but during a follow-up visit a large mass was found in the right upper quadrant. Surgical exploration was performed, and a tumor was found in the left lobe of the liver. Left hepatic lobectomy was performed. Histological evaluation of the surgical specimen revealed a well-differentiated hepatocellular carcinoma, superimposed on post-necrotic cirrhosis.

During the 6 months following surgery the patient gained 40 to 50 lbs, grew 5 inches, and underwent pubescence. In February of 1969 his height was 62-¾" and his weight 112 lbs., and while this still left him in the less than third percentile according to height and weight for age, it certainly showed marked progression in development. The sexual development at this time was that of an adult male, and there was no gynecomastia. The patient appeared to be doing

---

* Chief Resident, Department of Medicine, Washington Hospital Center, 110 Irving Street, N. W. Washington, D. C.

well until February of 1970 when he was re-admitted for upper gastrointestinal bleeding. Surgical exploration was again performed and revealed recurrant hepatocellular carcinoma. A palliative resection was performed followed by therapy with 5-flurouracil.

During this most recent hospitalization plasma testosterone, FSH, chorionic gonadotrophin, and chorionic somato-mammotrophin levels were determined through the courtesy of Dr. Sol Rosen of the NIH. The plasma testosterone value was 0.30 micrograms per 100 ml, normal being 0.40 to 1.00 micrograms per 100 ml. This is significantly decreased for a male of his age group. The other assays performed were all considered either within normal limits or were undetectable.

The relationship between the primary tumor and the endocrinologic picture seen in this patient remains as unclear as the case reported 22 years ago. The testosterone concentration was low, but all other measurements were normal, and the meaning of 1 determination is not known. First, we could assume that there is no relationship, and, in fact, this did represent familial short stature and late pubescence with an incidental hepatocellular carcinoma. Since there was such an increase in growth and puberty shortly after removal of the tumor, this would seem unlikely. Second is the possibility that the tumor, through its debilitating effect on the patient, produced this response. It has been well documented that children deprived of physical or emotional needs may be very slow in growth and psychological development. However, the finding of the tumor in our patient was incidental. His appetite was good and he lived in a fairly normal family environment—this also would seem an unlikely possibility. The third thought is that the tumor in some way either interfered with the hypothalamic pituitary axis or with the normal hepatic catabolism of testosterone to produce its effect. The former has previously been postulated as the mechanism by which endometrial carcinoma alters normal growth hormone response.[7] The latter has recently been suggested as 1 of the defects in acute intermittent porpyhria, in which there is an hepatic enzymatic deficiency, resulting in an increase in the 5$\beta$ hydroxylated metabolate etiocholanolone and a decrease in the 5$\alpha$ hydroxylated metabolate androsterone.[9] It might also be possible that altered testosterone catabolism could lead to an increase in estradiol, thus entering the estrogenic metabolic pathway. This at present is a new field of study, and it would be difficult to attempt to draw any conclusions. I believe that this patient represents another example of a primary tumor of non-endocrinologic origin producing an ectopic endocrinologic syndrome.

## Acknowledgment

I am indebted to Dr. George A. Boinis and Dr. Wellington Hung who have followed this patient and contributed their information.

## References

1. KNILL-JONES, R. P., BUCKELS, R. M., PARSONS, V., CALNE, R. H., and WILLIAMS, R.: Hypercalcemia and increased parathyroid-hormone activity in a primary hepatoma. New Eng. J. Med., 1970, 282, 704.
2. LANDAU, B. R., ET AL: The mechanism of hepatoma-induced hypoglycemia. Cancer, 1962, 15, 118.
3. KAN, Y. W., ET AL: Further observations of polycythemia in hepatocellular carcinoma. Blood, 1961, 18, 592.
4. DONATI, R. M., ET AL: Erythrocythemia and neoplastic tumors. Ann. Intern. Med., 1963, 58, 47.
5. HUNG, W., ET AL: Precocious puberty in a boy with hepatoma and circulating gonadotropin. J. Pediat., 1963, 63, 895.
6. STEINER, H., DAHLBACK, O., and WALDENSTROM, J.: Ectopic growth-hormone production and osteo artropathy in carcinoma of the bronchus. Lancet, 1968, 1, 783.
7. CASPER, P. J., and SHERMAN, C.: Growth hormone secretion in patients with endometrial carcinoma. New Eng. J. Med., 1969, 281, 1448.
8. BEYNON, A. E.: Primary carcinoma of the liver in a boy aged 15. Lancet, 1948, 2, 528.
9. GILLETTE, P. N., BRADLOW, H. L., GALLAGHER, F. F., and KAPPAS, A.: A new Biochemical lesion in acute intermittent porphyria: deficiency of steroid $\Delta^4$–5$\alpha$-reductase activity. J. Clin. Invest., 1970, 49, 39a (Abstract No. 110, 1970 Program, American Society for Clinical Investigation, 62nd Annual Meeting).

# President's Page

## MEDICINE AND POLITICS

For many years the popular belief was held that the medical profession should remain aloof from politics. The image of the doctor was cast in such a way that any political interests or activism would be considered unprofessional and undignified. From time to time individual physicians entered the area of the political arena and public eye, whereas medical societies as a whole were fearful of active political participation.

The District of Columbia has just completed the first primary election for a non-voting delegate to the House of Representatives. Before lending our individual support, it should be of considerable interest to us where these candidates stand on the medical issues of the day. It is important to know and understand the various positions these men would take regarding comprehensive health planning, aid to medical schools, restoration of grants for research, and National Health Service legislation, to name a few. Although the Medical Society is not in a position to endorse candidates, it would be helpful for its members to be acquainted with the views candidates for office hold on issues of great importance to the future of American medicine. This also holds true in the neighboring states of Maryland and Virginia for those of us who live outside the District limits.

Even today many of us feel that physicians should confine themselves to the healing of the sick and leave politics for the politician. This attitude has led us into the corner we find ourselves in at this time. The experiences in other countries have meant relatively little to those proposing various types of changes in medical practice and health care. The tremendous increase in costs and the decline in quality of care have been well documented. Although there are many compelling reasons why American medicine must adopt new methods of health care delivery, there is little to suggest that the programs of our Western European friends would improve overall medical care in this country.

Even closer to home, in neighboring Canada, there have been rumblings for years about the nature of their health service program. Threats, counter-threats, strikes and new restrictive laws have been the pattern. Most currently in the Province of Quebec new legislation has been imposed upon the medical profession of a harsh and punitive nature. Fines or threats of jail await those who fail to follow the unjust restrictive practice measures.

I think it is time we awaken and accept the challenge confronting us. I would urge all of us to become better acquainted with impending social legislation, with its attendant limitations, controls and regulations. There are bills currently before Congress that would change the very 'face' of medicine as any of us have ever known it.

Changes are necessary. We all agree that the medical needs of all our people are not being met. Certainly new methods of health-care delivery should be developed, and we should be part of these changes. Acting as independents or as members of either major political party we can exert influence. For many of our members the political arm of the AMA, AMPAC and its D.C. Chapter, DOCPAC, offer an excellent opportunity for political participation. To those of us interested, an unusual opportunity is available. The national AMPAC meeting will be held in Washington, D.C. on March 13 and 14, 1971 at the Washington Hilton Hotel. A special invitation is being offered to all of our members to attend, observe and participate in any and all phases of its program. I think this would be a most informative and educational experience for anyone interested in medicine and politics. Let us exert our rights as citizens in a democracy and make our voices heard and our medicine and politics.

Our first dinner meeting will be held on March 10th and will feature Dr. Paul J. Sanazaro, Director of the National Center for Health Services, Research and Development of the U. S. Department of Health, Education and Welfare. He will speak on "Peer Review—What's New and On the Horizon." This will give us a close-up view of "things to come" and help us better understand proposed legislation. Let us exert our rights as citizens in a democracy to be informed and make our voices heard and our presence felt. I'm off my apathy. How about you?

Marvin C. Korengold

**CALORIES** / 7 oz. Serving*

| | | | |
|---|---|---|---|
| Beef Broth | 22 | Vegetable | 68 |
| Consommé | 29 | Tomato | 69 |
| Chicken with Rice | 43 | Cream of Asparagus | 70 |
| Chicken Gumbo | 48 | Cream of Chicken | 76 |
| Chicken Noodle | 54 | Cream of Mushroom | 115 |
| Cream of Potato | 58 | Green Pea | 116 |
| Chicken Vegetable | 60 | Cream of Shrimp (Frozen) | 132 |
| Vegetable Beef | 66 | Bean with Bacon | 133 |

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

here's a soup
for almost every patient and diet
.for every meal
and, it's made by Campbell

# When the stage is set for diarrhea...

**Diarrhea . . . thwarted once again!**

Time after time . . . just when plans seem sure to be shattered . . . the effective and prompt action of Lomotil comes to the rescue.

Here is an antidiarrheal with a performance record that few can challenge. A versatile actor, Lomotil stars in the treatment of diarrhea associated with gastroenteritis, irritable bowel, functional hypermotility, regional enteritis, malabsorption syndrome, drugs, acute infections, ulcerative colitis and food poisoning. In addition, it plays a major role in the control of intestinal transit time in patients with ileostomies and colostomies and of the diarrhea occurring after gastric surgery.

So . . . when Lomotil is in the cast (even in a supporting role), it's curtains for diarrhea!

# Lomotil®

**TABLETS/LIQUID**

Each tablet and each 5 cc. of liquid contain:
Diphenoxylate hydrochloride. . .2.5 mg.
(Warning: may be habit-forming)
Atropine sulfate . . . . . . . . . . .0.025 mg.

# Saves the Show

*Warnings:* Lomotil should be used with caution in patients taking barbiturates and, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

*Precautions:* Lomotil is a federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be

kept out of reach of children. Signs of accidental overdosage may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

*Adverse Reactions:* Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise.

*Overdosage:* The medication should be kept out of reach of children since accidental overdosage may cause severe, even fatal, respiratory depression.

*Dosage:* The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

**Children:**
3-6 mo. . . . ½ tsp.* t.i.d. (3 mg.)
6-12 mo. . . ½ tsp. q.i.d. (4 mg.)
1-2 yr. . . . . ½ tsp. 5 times daily (5 mg.)
2-5 yr. . . . . 1 tsp. t.i.d. (6 mg.)
5-8 yr. . . . . 1 tsp. q.i.d. (8 mg.)
8-12 yr. . . . 1 tsp. 5 times daily (10 mg.)
Adults: . . . . 2 tsp. 5 times daily (20 mg.)
or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful.

Use of Lomotil is not recommended in infants less than 3 months of age.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

SEARLE
Research in the Service of Medicine
G. D. Searle & Co., Chicago, Illinois 60680

052

Nothing new about Synirin othe
...it's a stable, uncoated, fast dis
tablet of aspirin with pentobarbi
potentiating the aspirin analgesia

Syn

ASPIRIN 5 GR.

*ETHICAL ANALGESIA (*
*in 100 units with p*

PRESCRIBING INFORMA
headaches and arthritic pain
and pentobarbital begin their
ing for about 4 hours. The sn
gives no perceptible sedati
stroyed by the body and t
Synirin will supply any as
safety. Use aspirin with caut

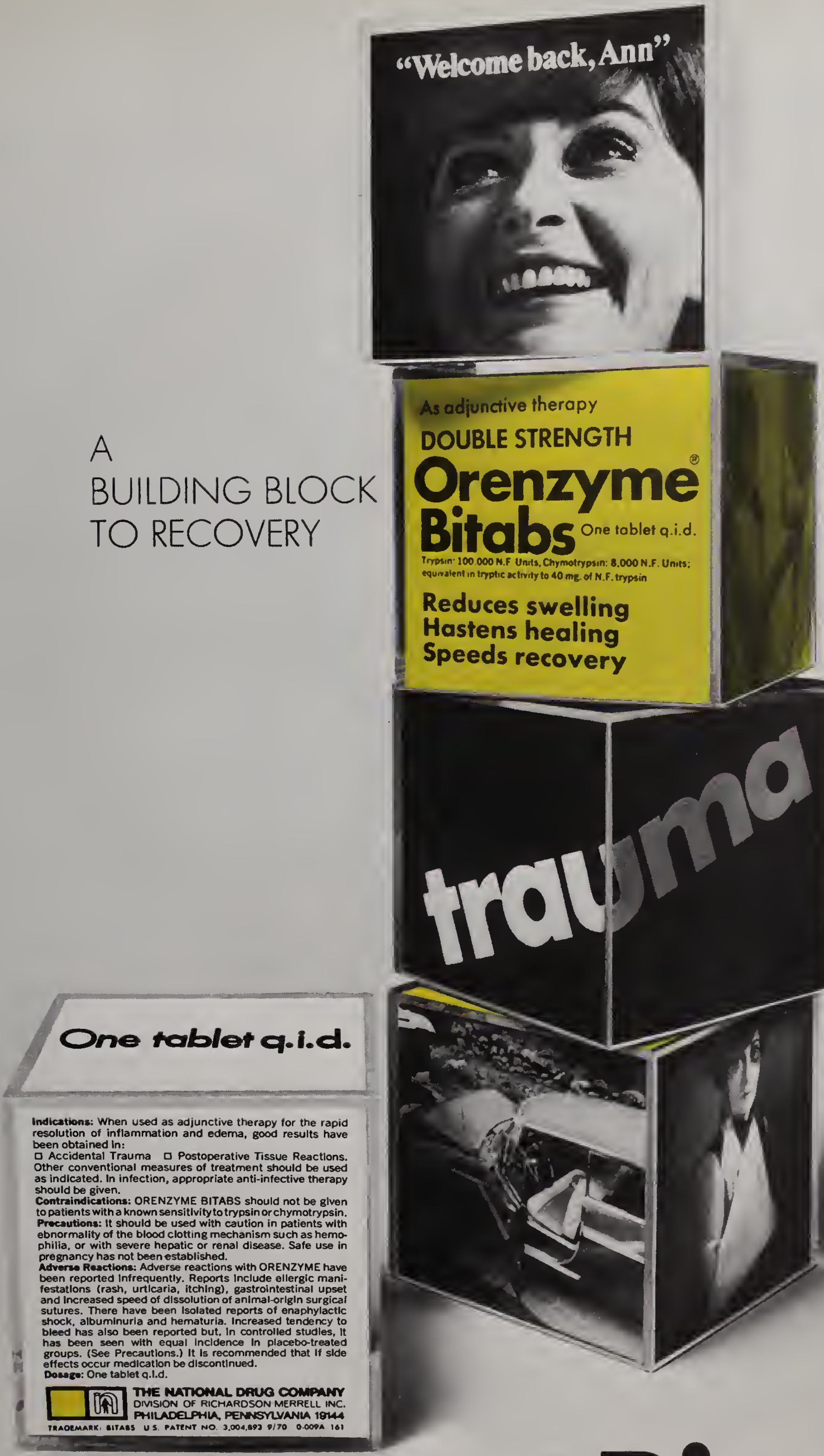
EACH UNCOATED TA

Aspirin . . . . . . . . . . . .
Pentobarbital* . . . . . .
*May be habi

*Federal law prohibits dispen*

DISPENSED IN BOTTLES OF

A
BUILDING BLOCK
TO RECOVERY


"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs
One tablet q.i.d.
Trypsin: 100.000 N.F Units, Chymotrypsin: 8.000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma
One tablet q.i.d.

**Indications:** When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
**Contraindications:** ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
**Precautions:** It should be used with caution in patients with ebnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
**Adverse Reactions:** Adverse reactions with ORENZYME have been reported infrequently. Reports include ellergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of enaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
**Dosage:** One tablet q.i.d.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK: BITABS U.S. PATENT NO. 3,004,893 9/70 0-009A 161

**Orenzyme® Bitabs**

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

# The causes of vaginitis are multiple

**Trichomonads . . . monilia . . . bacteria**
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

**AVC**
**Cream** (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

**Suppositories** (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

**Contraindications:** Known sensitivity to sulfanamides.
**Precautions/Adverse Reactions:** The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
**Dosage:** One applicatorful or one suppository intravaginally once or twice daily.
**Supplied:** Cream – Four-ounce tube with or without applicator. Suppositories – Box of 12 with applicator.
TRADEMARK: AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

# AVC
# The treatment is singular

# History of the Medical Society of the District of Columbia

## CHAPTER VIII

### Pressures for Change

THERE HAD BEEN POWERFUL forces at work to bring about change in the delivery of medical service ever since the report of the Committee on the Costs of Medical Care. This was reflected in the health legislation before the Congress and the various State legislatures, the actions of the AMA House of Delegates, and numerous experiments in the delivery of medical care.

If not before, certainly after the antitrust trial, the Medical Society of the District of Columbia had become a progressive body to be reckoned with in organized medicine. Small as it was in size when compared to large State medical societies, the Society's officers were well aware that the Nation's Capital was a sensitive spot where the AMA was concerned. Views of the Society's delegates could not be dismissed as of little consequence. Furthermore, there was no hesitation on the part of its delegates and officers to speak their minds.

The Society had learned some hard lessons through the failure of Mutual Health Service and the antitrust trail. Its new leaders were determined that its policies would be forward-looking and that it would assert its independence.

If there was any doubt that the Roosevelt Administration was determined to bring organized medicine 'to heel' it should have been dispelled by the proceedings at the Government-sponsored National Health Conference held at the Mayflower Hotel in Washington on July 18–20, 1938. Of the 171 delegates participating in the Conference 53 were physicians. However, a number of these represented Government departments, welfare organizations, hospitals, and so on. One physician not favorable to the AMA, for example, attacked the Association's policy of "doing nothing and doing it skillfully."

The AMA was represented by Dr. Irvin Abell, President of the Association, Dr. Olin West, Executive Vice-President of the AMA, and Dr. Morris Fishbein, Editor of the *Journal of the AMA,* all of whom defended the organization's policies.

Presiding at the Conference was Josephine Roche, Chairman of the Interdepartmental Committee to Coordinate Health and Welfare Activities. Under this Committee was the Technical Committee on Medical Care, of which Dr. Martha M. Elliot of the Children's Bureau was Chairman. Serving on both Committees were nationally-known Administration supporters: Mr. Arthur J. Altmeyer, Mr. Oscar L. Chapman, Mr. I. S. Falk, Dr. Joseph W. Mountain, Mr. George St. J. Perrott, and others.

At the opening session, Miss Roche read a letter of greeting from President Roosevelt. The following is an excerpt: "When we see what we know how to do, yet have not done, it is clear that there is need for coordinating a national program of action. Such a program necessarily must take account of the fact that millions lack the individual means to pay for adequate medical care."

Following the introductory remarks by Miss Roche, Dr. Thomas Parran, Surgeon General of the United States Public Health Service, was introduced. in the course the course of his speech, he said:

"We need also to provide medical care for the treatment of disease and a relief of suffering among those groups of the population who unaided are unable to provide such care for themselves. Even when such care is available, too often it is delayed while we haggle over whether the patient can or cannot pay something for it, or how much. When a man's house is burning down the city does not fail to call out the fire department because he cannot pay for its services. Yet if the man's family is ravaged by sickness there is rarely provided a swift and efficient means of assisting them and this in spite of the fact that the damage done him and the danger and expense to the community may be greater from sickness than from fire.

"The major purpose of this conference is to plan for the more complete application of our knowledge of how to prevent disease."

Of greatest interest to representatives of the AMA were the recommendations of the Technical Committee on Medical Care. It proposed that a comprehensive medical care program be made available to the entire population with funds derived from two sources: "(a) general taxation or special tax assessments, and (b) specific insurance contributions from the potential beneficiaries of an insurance system."

AMA officials commented on the proposed program as follows:

Dr. Abell: "Those people who think that they can devise a centrally controlled medical service plan which can be fitted to the varying conditions of the States, counties, and the cities of this country are discussing theories which no practical health administrator could possibly approve."

Dr. West: "There is no one plan for the provision of medical service that is going to operate successfully and satisfactorily in all of the States and the counties and the communities of this nation, and I predict that you are going to find it out before you have gone very far."

Dr. Fishbein: "Who has even mentioned here the manner by which this extensive program is to be integrated into our American civilization? What is to happen to the insurance companies which we have already established? What is to happen to the sickness plans of the Moose, the Eagles, the Masons, the Odd Fellows and the Elks, and all of those people who have put a great deal of money into their own institutions and into their own sanitoria? What is to happen to hospitalization plans which have been carefully built with the utmost difficulty into something which can be integrated into the medical scheme in New York and in Chicago and which now embrace more than 2 1/2 million of the American people? What is to happen to the nonprofit voluntary hospitals built by Catholics and Jews and Methodists and Presbyterians and all of the other religious groups who, out of a faith that makes care of the sick a fundamental duty of mankind, have built these institutions and given of their services for the American people?"

Strong proponents of the program also had their say:

Mr. Joseph A. Padway, General Council, American Federation of Labor: "We believe there should be a compulsory set-up, a compulsory plan, which will afford to every human being within certain classifications medical attention, wage compensation, and the other elements that have been discussed . . . We are definitely committed to this: The plan for health insurance should be placed in the Social Security Board."

Abraham Epstein, Executive Secretary, American Association for Social Security: "A health insurance program, if it is going to be worth the paper it is written on, must be on a compulsory basis. As others have pointed out, voluntary health insurance has failed everywhere. Our much-bosted voluntary programs are not really meeting the problem. There are few wage-earners in hospitalization schemes, and, after all, it is the wage-earners that we are primarily concerned with in health insurance, as with any social insurance program."

Dr. Hugh Cabot, Consulting Surgeon, Mayo Clinic: "As at present organized, medicine is a competitive business. Many of us have had the gravest difficulty in reconciling such competition with the ideal which we are all taught and which many of us, even at my age, continue to believe is the basis of the profession. We remember, as long as we remember anything, the fact that medical service sprang from the church, as did all great professions of the community. It is possible in a highly commercialized environment to maintain a service organization on a competitive basis? If someone will answer me that one question, I will be his slave for life."

Frank Graham, President, University of North Carolina: "The groups with a vested interest resist any change, but a small minority or rebel group breaks away and speaks out in the larger social interest. The rebels in time become the majority, and another social advance is on its way until the privileged and powerful reorganize on some other social front against the unrecognized frontiersmen of their day. The rebel group in the American Medical Association holds the front line now and for some years to come, unafraid of the future which is theirs!"

Many other delegates spoke pro and con. No resolution or commitment of any kind was adopted by the Conference. It was a certainty, however, that the proposals made were preliminary to the introduction of health legislation.

In anticipation of this development a special session of the AMA House of Delegates was held in Chicago on September 16 and 17, 1938. Attending from the Medical Society of the District of Columbia were Delegate to the House, Dr. H. C. Macatee; Dr. F. X. McGovern, Chairman of the Medical Society's Executive Committee; Dr. Wallace M. Yater, Editor of the *Medical Annals of D.C.;* and Theodore Wiprud, Executive Director and Secretary.

As reported to the Society later by Dr. Macatee, the tax-supported compulsory health insurance system proposed at the National Health Conference was dispproved. Dr. Macatee said that Dr. McGovern had appeared before a reference committee in connection with the proposal. Dr. McGoveren, it appeared, had made a "very strong and able representation," stating the local problems which existed in Washington and the fixed purpose of the Medical Society to develop some type of medical service plan for the low-income group. His appearance was a determining factor which caused the House to make specific recommendations encouraging "county or district medical societies . . . to develop appropriate means to meet their local requirements," believing that, in addition to insurance for hospitalization . . . it is practicable to develop cash indemnity insurance plans to cover, in whole or in part, the cost of an emergency or prolonged illness."

It should be noted that Dr. McGovern favored the service plans. Like others of the District of Columbia delegation, he was disappointed that the House endorsed only indemnity plans. A wiry, energetic, assertive man, Dr. McGovern did not hesitate to let influential delegates in the House know of his feelings in the matter.

In its report to the House, the Reference Committee stated:

"Your committee is not willing to foster any system of compulsory health insurance. The committee is convinced that it is a complicated, bueaucratic system which has no place in a democratic state. It would undoubtedly set up a far-reaching tax system greatly increasing the cost of government. That it would lend itself to political control and manipulation there is not doubt."

The House concurred.

### Health Insurance Controversy 1938–1945

As had been anticipated, medical-care legislation was introduced in the Congress in 1939 to implement the proposals of the National Health Conference. Senator Robert F. Wagner of New York introduced the legislation bearing his name. Endeavoring to reassure the medical profession, he issued a statement from which the following is an excerpt.

> "Under no circumstances will the Federal Government undertake to furnish medical care. Administration in all cases will be through the States, which will develop their plans only after careful surveys of local needs and conditions and with a view to supplementing, not displacing, the existing efforts of the profession, the localities, charitable organizations and hospitals . . . . The plans may be supported by insurance contributions, general revenue, or both. The method and scope of medical services are likewise for the States to determine and may include services rendered through existing private agencies or institutions."

The 76th Congress came to a close without any action being taken on the Wagner Health Bill. However, it was apparent that supporters were just taking a deep breath for another effort.

In January 1940 the Roosevelt Administration came up with a revised Wagner Health Bill limited to construction of hospitals in "needy" areas. Many physicians were in accord with this legislation. Even the AMA expressed satisfaction. However, observers took note of the President's statement: "In order that at least a beginning may be made I now propose for consideration of the Congress a program for construction of small hospitals in needy areas, especially in rural areas, not now provided with them."

Note was taken especially of the word "beginning."

Tough-minded General High S. Johnson, head of the National Recovery Administration (NRA), had this to say about the proposed legislation:

> "Hard-boiled as any criticism of this project must seem, Congress owes a positive and pressing duty to examine its (the Wagner Hospital Bill) implications before it opens any more expanding spigots into the Federal treasury. It has all the earmarks of the Arab's camel which began by persuading its master to let it stick just the tip of its nose under the tent to get it out of the cold and wound up by wearing the tent as a horse blanket, leaving the Arab–nose and all–in the chill of the outer darkness.
>
> "It is true that the proposal doesn't go as far as Senator Wagner's great liberal generosity with taxpayers' money and proposed universally socialized medicine at

EADING MANUFACTURER
ULIN SYRINGES

B-D

ON, DICKINSON AND COMPANY
ERFORD, NEW JERSEY 07070

FREE CLINICAL SUPPLY

PLASTIPAK
INSULIN SYRINGE/NEEDLE UNITS

Send samples to:

Name ______________________________
(Physician's Signature

Address ______________________________

City ______________ State ______________ Zip ____________

Clip out postcard on dotted line . . . no stamp required

ow you can lower the risk of
sulin error when your patient is
me . . . and alone

B-D

SINGLE-USE
PLASTIPAK
INSULIN SYRINGE/NEEDLE UNIT

8401
RED CAP u40

8406
GREEN CAP u80

as specific as insulin itself

Postage
will be paid
by
Addressee

No
postage stamp
necessary
if mailed in the
United States

**BUSINESS REPLY MAIL**
First Class Permit No. 134, Fairview, N.J.

Becton-Dickinson and Company
Consumer Products Division
P.O. Box 183
Fairview, New Jersey 07022

**Clip coupon on dotted line . . . fill out other side**
**send for physician's free samples**

**THE LEADING MANUFACTUR**
**OF INSULIN SYRING**

B-D

**BECTON, DICKINSON AND COMPA**
**RUTHERFORD, NEW JERSEY 07**

color-coded caps and numbers—red for U40, green for U80

easy-to-hold, easy-to-handle—even for child diabetics with small hands or adults with stiff fingers

pocket-or-purse portable—sturdy from tip to top

## single-scale PLASTIPAK insulin syringe needle units eliminate the hazard of reading the wrong scale

low cost—barely pennies higher than old-fashioned disposable needles without syringe . . . about as low as a cup of coffee

10
20
30
40
UNITS
20
30
40
50
60
70
80
UNITS

U40 U80

presterilized—consistently dependable, and sterility is assured until cap is opened

the sharpest needle your patient can buy—far sharper than any reusable needle

integral cannula reduces air bubbles

## the first insulin syringe so low in cost your patient can use a new one every time

its single-scale—U40 or U80—minimizes the risk of measurement errors. Your patient *can't* read the wrong scale.

big numbers, wide spaces for easy reading

**Supplied:** in packages of 10—
PLASTIPAK syringe U-40 (red) or
PLASTIPAK syringe U-80 (green)
Prescription required in most states.

BECTON B-D
DICKINSON
Consumer Products Division
Becton, Dickinson and Company
Rutherford, New Jersey 07070

-D and PLASTIPAK are trademarks.

Pr

whatever the cost. It doesn't go as far as Dr. Townsend would like to go to maintain the one-third of us past middle age at the expense of the one-third of us who are working and producing to support and prepare the one-third of us who haven't started. But it goes in the same direction as both of these suggested kindly benefits."

There was a deluge of health legislation in 1940. Two were health insurance bills, one of the Taft-Smith-Donnell version and the other by Republican Senator Henry Cabot Lodge; neither was seriously considered by the Congress.

The now so-called Wagner-George Hospital Bill was recommended for passage by the Senate's Committee on Education and Labor with this comment:

"Your Committee recognizes that the proposed program . . . is only a step toward the solution of health problems which have received its attention for the past several months and would provide increased hospital facilities only in localities where the need is most desperate. It is felt, however, that this measure should be immediately adopted because of the pressing necessity of the situation, and your Committee has designed the measure so that it will fit into a more comprehensive program which is being formulated by your Committee."

In his dedicatory address at the National Institutes of Health on October 31, 1940 President Roosevelt said:

"Neither the American people nor their Government intend to socialize medical practice any more than they plan to socialize industry. In American life the family doctor, the general practitioner, performs a service which we rely upon and trust.

"No one has a greater appreciation than I of the skill and self-sacrifice of the medical profession, and there can be no substitute for the personal relationship between doctor and patient, which is characteristic of and a source of strength of medical practice in our land."

Voteless District of Columbia physicians made themselves most effectively felt through the AMA House of Delegates. Quiet-spoken and an unusually able delegate from the District, Dr. Henry C. Macatee had become a progressive in the truest sense. He supported a resolution in the House providing for corrdination of the medical service plans in the country to be controlled by the medical profession.

However, it was not until 1942 that the House was ready to approve the principle of medical plans on a service basis if they were sponsored by a constituent or component medical society. Representatives of the Medical Society of the District of Columbia can take a share of credit for this forward step.

Conditions later in the year were quiet on the medical front, the Government being occupied in gearing itself for World War II. Doctors, too, were busy with war chores; in fact, the medical profession made a major contribution to the war effort both in the military an on the home front.

Dr. F. X. McGovern, as Chairman of the Medical Society's Executive Board, made some interesting comments at the Society's Annual Business Meeting in 1942:

"There is one matter to which your Chairman has given considerable thought and that is what the future holds for the medical profession. It seems to him that failure to anticipate changes in medical practice following the War is unrealistic. However, there are physicians, probably a considerable number, who believe that somehow things will return to what they were previous to this crisis. Your Chairman is not one of these, and he believes that it is not too early for the profession to consider what what the probable changes will be."

Responding to pressures for change in medical practice, the AMA-sponsored National Physicians' Committee came into being. At a meeting of the Medical Society on March 3, 1940, and upon recommendation of the Executive Board, it refused to endorse the National Physicians' Committee which, naturally, had the enthusiastic approval of the AMA. It was pointed out that the organization's officers, except for the administrator, were active in affairs of the AMA. It did not agree with the propriety of effectiveness of NPC whose main purpose was to oppose health legislation with which the AMA did not agree. This, it believed, could best be dealt with by the AMA itself and its constituent societies. The Medical Society was unimpressed by the argument that legislation opposed by the AMA might lead to its taxation.

Conservatives–undoubtedly a majority in the AMA House of Delegates–were jolted by the address made by Dr. Fred W. Rankin on retiring as President of the AMA in 1943. Here is in part what Dr. Rankin said:

"It must now be apparent, even to those who have been most purblindly recalcitrant, that mighty influences are at work to effect epochal changes in the complexion of medical practice . . . . The directional signposts of postwar planning may now be clearly read by proposals already made for broadening the Social Security Program and extending the Nation's economic resources to assure 'adequate medical and health care for all regardless of the place of residence or the income status' . . . . That our medical descendants should look back and point a culpable finger to our page of history which would read that our actions were 'too little and too late' is a plaguing thought."

In reporting to the Medical Society as its delegate, Dr. Macatee commented on Dr. Rankin's address and also on that of Dr. James E. Pullen, President-elect, that they "were particularly notable because they both boldly abandoned the intransigent tone toward impending socioeconomic changes in medical practice which have hitherto marked a pronouncement of the AMA leadership."

On June 3, 1943 the Wagner-Murray-Dingell bill was introduced in Congress. Since Wagner Hospital Bill had not been enacted another attempt was going to be made for more conprehensive legislation. This was "socialized medicine" legislation along the lines of the British system.

President Fred R. Sanderson of the Medical Society observed: "Warning signs are already up. Proponents of a system of government-controlled medicine are very active. So if physicians really expect to have anything to say about how medicine is to be practiced in the future they had better prepare now for the inevitable struggle."

Throughout 1944 the AMA was largely concerned with aggressive legislative activities. The Wagner-Murray-Dingell bill it was decided, must be stopped at all costs. President Sanderson and Executive Director Wiprud were invited to a meeting of the AMA Council of Medical Service and Public Relations held at the Mayflower Hotel, Washington, on May 3, 1944.

Dr. Sanderson said in his prepared remarks:

> "It is our feeling that the American Medical Association, splendid though its record has been, is looked upon by many people with whom we speak in Washington as an 'anti' group. In other words, the Association is seldom for but usually against any new proposal. Of course we know that it is not the wish of organized medicine to appear in this light, nor has its opposition been due to selfish motives, as is frequently charged by many (unsympathetic) persons . . . . The fact remains, however, that many persons who should be our friends are not."

The Observer, whose column "In and Out of Focus" appeared regularly in the *Medical Annals of the District of Columbia* had something to say along this line:

> "This situation serves to confirm the opinion that your Observer has held for some time. Organized medicine has been on the defensive for too long. The American Medical Association should come forward immediately with its conception of a national health program. This program should include voluntary sickness insurance and diagnostic centers. It isn't enough to talk about the desirability of experimentation, to adopt platforms and principles. Our national organization must offer something tangible . . . . Time is fast running out. We still have the ball. What are we going to do with it?"

This appeared to sum up the feelings of many of the physicians in the District of Columbia.

Although the contending forces kept up a running battle on compulsory health insurance, there followed a brief lull following the death of President Roosevelt in 1945.

### Health Insurance Controversy 1945–1953

A new figure now appeared on the scene in Washington, Dr. Joseph S. Lawrence, a veteran lobbyist from the State of New York where he had been Executive Officer of the State Medical Society. He had been appointed Director of the AMA's Washington Office. Joe was a modest and likable man who was soon favorably known to many legislators on "the Hill.' He ran his office for several years successfully without interference from the AMA headquarters in Chicago.

A new edition of the Wagner-Murray-Dingell Bill (1945), the Government Printing Office reported, was a best seller. However, it was still unacceptable to the AMA.

Numerous hearings were held before Senate committees on health insurance legislation. These committees for some years had been headed by Seantor Claude Pepper of Florida and Senator James E. Murray of Montana. Representatives of groups for and against (usually the AMA) pleaded their cause vigorously. It was rare that Senators themselves clashed, but an exchange took place on one occasion between Senator Robert Taft of Ohio and Senator Murray that was not only heated but highly amusing to the spectators (Appendix I). Senator Murray, ordinarily the mildest of men, exploded in fury at his colleague. Bad blood between the two had come to the surface. Senator Taft was not in the least cowed by Senator Murray's anger.

It had been hoped that the new President, Harry S. Truman, would abandon the attempt to make compulsory health insurance acceptable to the medical profession.

But, if anything, he was more blunt and unyielding than his predecessor. He offered his national health program without consultation with organized medicine.

The Observer commented: "Certainly one of the most regrettable factors in this situation has been the AMA's lack of leadership. Not until very recently has there been evidence of the Association's awakening to its social responsibilities. It now remains to be seen if it is a case of 'too little and too late?' That may be determined before these lines appear."

What the AMA finally proposed was a 14-point program developed by its Council on Medical Service and Public Relations and its Board of Trustees. It was published in *The Journal of the AMA* for July 21, 1945. Nothing was said as to the implementation of the program.

It became increasingly apparent to the Medical Society's leaders that unless the AMA came up with a specific national medical program the proponents of a Government system of medical care might prevail, principles were not enough, and the public image of organized medicine was suffering. Protests against "political medicine" were wearing thin. At a meeting of the AMA House of Delegates in December 1945 delegates from Oklahoma and the District of Columbia had the same objective in mind when they offered a resolution urging the AMA to come up with a specific national health program. The language of the District resolution with minor changes was recommended by the AMA Board of Trustees and the Council on Medical Service and Public Relations for adoption. The House approved.

The resolution provided that the Board and the Council "proceed as promptly as possible with the development of a specific national health program, with emphasis upon a nation-wide organization of locally administered medical prepayment plans, sponsored by medical societies."

The Observer exulted: "There is no doubt about it, history was made on the morning of December 5, for on that day organized medicine committed itself to a step which if carried out will vitally affect the people of this country."

Under the caption, "Doctors Seek Substitutes for U.S. Health Program," Thomas Henry, correspondent for *The Evening Star,* wrote: "This decision by the American Medical Association was largely due to the efforts of the Medical Society of the District of Columbia, one of the most progressive groups in organized medicine, which essentially framed the resolution adopted at Chicago. '

Not long thereafter funds were provided by the American Medical Association to establish the Associated Medical Care Plans with a full-time director. Later the AMA severed its connection with AMCP, and the Blue Shield Plans, a nation-wide network of voluntary medical prepayment plans, most of them sponsored by medical societies, came into being.

In his message to Congress in January 1948 President Truman stated: "The greatest gap in our Social Security structure is the lack of provisions for the Nation's health. We are rightly proud of the high standards of medical care we know how to provide in the United States. The fact is, however, that most of our people cannot afford to pay for the care they need. I have often and strongly urged that this condition demands a national system of payment for medical care based on welltried insurance principles."

A National Health Assembly was held in Washington in May of that year. Nothing much was accomplished, and no progress was made by advocates of compulsory health insurance.

Major General Paul H. Hawley, Chief Executive Officer of the Blue Shield Commission, was far from happy when he addressed the Presidents and other officers of State Medical Societies in June 1948 on the subject "Blue Cross or Compulsory health Insurance." In the course of his address he said: "If the medical profession does not at once assume leadership, if it does not at once cease double talk and double dealing with voluntary nonprofit prepayment plans and throw its influence squarely and honestly behind these plans, we are going to have compulsory government health insurance in this country within three years."

The comments of this colorful and outspoken ex-soldier jarred the medical profession.

The controversy over compulsory health insurance was often at 'white heat' during the remainder of the Truman Administration, but defeat was staved off by the AMA, sometimes by high-powered means. Also, the now flourishing Blue Shield movement did its part in carrying the day.

The AMA's Washington Office was still the listening post, having had several directors since Dr. Lawrence's retirement.

## Health Legislation 1952–1962

With good reason the AMA looked for less troubled times in the Eisenhower Administration. The President's statement in Los Angles on October 9, 1952 was reassuring:

> "Federal compulsion, with our health supervised under a Washington stethoscope, is not American and it is not the answer. Instead of more and better medical care it would give us poorer medical care.
>
> "The answer is to build on the system of voluntary non-profit health insurance plans which our people have already developed at an amazing rate . . . .
>
> "Much remains to be done to perfect these plans so that they really supply adequate protection. But to destroy all this, by piling Government medicine on top, would be disasterous."

However, President Eisenhower unveiled a health program in early 1954 which contained one element of mild surprise. He still insisted that the Government "need not and should not go into the insurance business." He proposed a Federal Insurance Service "to encourage private and non-private health insurance organizations to offer a broader health protection to more families. The Service would reinsure the special, additional risks involved in such broader protection."

The legislation was cooly received by the medical profession and killed in the House of Representatives. The angered President said: "In the campaign I made two promises which had to do with the health of the American people. I said, first, that I was opposed to socialized medicine . . . I also said in talking about the great difficiencies in medical care in this country and particularly for the people who can't afford the expensive type of service that is now available to us in our best hospitals that something must be done . . . . . This is only a temporary defeat."

Many physicians otherwise loyal to the AMA were not happy about its negativistic attitude toward the reinsurance program.

The following report was adopted by the AMA House of Delegates in December 1958 relating to Medical Care of the Aged. It read in part: "For persons over 65 years of age with a reduced income and very modest resources it is necessary immediately to develop further the voluntary health insurance prepayment plans in a way that would be acceptable both to recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility in assuring adequate medical care for this group of our citizens." It recommended that the report be sent to the Blue Shield Plans and private insurance companies.

However, the so-called Forand Bill, which would amend the Social Security Act and Internal Revenue Code so as to provide insurance against the cost of hospitalization, nursing home services, and surgical services for the elderly was before the House Ways and Means Committee. This stirred up another controversy between the AMA and the Government which was to continue for the next few years.

In 1961 the Medical Society was still prodding the AMA for action. Dr. Donald Stubbs, President of the Medical Society, voiced his disappointment at a luncheon for the press prior to the 29th Annual Scientific Assembly. The meeting had not been arranged for this purpose, but at its conclusion Dr. Stubbs made front page news when he stated that in the Executive Board's opinion the AMA's efforts in prepayment medicine were lagging. Determined to further clarify the Society's position, Dr. Stubbs read the following statement:

> "Our Society reaffirms its strong support of local non-profit voluntary prepayment as represented in this area by our own plan, Medical Service of D.C. Our support of voluntary health insurance goes even beyond this in our sincere cooperation with the insurance companies headed by Aetna and Group Health Association.
>
> "We still believe that we were right in 1945 when we successfully advocated the position of leadership by the AMA in its House of Delegates and again a year ago here in Washington. We are convinced that our urging of more active support at the national level is congenial with the attitude of the majority of physicians because they already support their Blue Shield Plans and health insurance companies locally and because their House of Delegates without dissenting vote gave the approval referred to in this city a year ago."

The *Washington Star* commented editorially that Dr. Dr. Stubbs "has every justification for the disappointment he has expressed at the lukewarm efforts made by the American Medical Association to improve and expand programs of voluntary medical and hospital insurance."

Station WTOP, which is owned by *The Washington Post*, editorialized both on television and radio:

> "For about 15 years the District Society has been arguing the need for more national conformity and coordination among the AMA, the American Hospital Association, and Blue Cross and Blue Shield. Late in 1960 the Society prevailed upon

the AMA's House of Delegates to pass a resolution directing the AMA to assume national leadership toward 'maximum development of the prepayment concept to provide health care for the American people.' Now it turns out that the AMA has been working toward its objective with something less than breathtaking speed."

The controversy between the Government and the AMA was still joined over Forand-type legislation in 1962. However, the House of Delegates adopted a resolution to make more vigorous efforts to support voluntary health insurance for the aged.

Remember when you went to Peoples in a horse and buggy to get a prescription filled? We do.

***120 million prescriptions later, Peoples still remembers that all prescriptions must be filled one at a time.***

Since 1905, all Peoples Drug Stores have filled more than one hundred twenty million prescriptions. We can't help but mark this impressive number with some justifiable pride. We think it's a real tribute to peoples' confidence in Peoples.

We remember those horse-and-buggy days. Of course, many things have changed. The drug industry has come a long, long way. The skills of the prescribing physician have become much more sophisticated. But, one thing has remained constant. A pharmacist still fills every prescription—one at a time. For, the *next* prescription we fill for you is every bit as important as all 120 million that came before.

PEOPLES®

PRESCRIPTION DRUG STORES

IF YOU HAVE CHILDREN ASK FOR A "SAFETY CAP" CONTAINER WHEN PEOPLES DRUG FILLS YOUR PRESCRIPTIONS.

**The concert was just underway,**
**When to the conductor's dismay**
**Cramps and diarrhea,**
**Did so quickly appear,**
**The maestro no longer could stay.**

Because diarrhea with cramping, nausea, and painful straining can strike at the most inopportune time, it takes a comprehensive agent to treat the total diarrheal syndrome and help get the patient back on the job. That's why so many physicians rely on Donnagel, especially during the fall and winter months when "flu" and viral gastroenteritis usually hit their peak.

Donnagel is much more than just a simple kaolin-pectin combination. It also contains the belladonna alkaloids to calm GI hypermotility and help relieve the distressing discomforts which so often accompany diarrhea. Certainly it's less expensive and more convenient than taking two medications. And the dosage is lower too. Available in the handy 4-oz. plastic bottle at pharmacies everywhere on your prescription or recommendation.

Schubert's Unfinished Symphony

When diarrhea and its discomforts separate a man from his job . . .

**Donnagel®**

Each fluid ounce contains: Kaolin, 6 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Sodium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

A·H·ROBINS

A. H. Robins Company,
1407 Cummings Drive,
Richmond, Va. 23220

Coughs are back.
4 FL. OZ.
A.H. ROBINS
Robitussin
GLYCERYL GUAIACOLATE
EXPECTORANT
KEEP THIS AND ALL MEDICINES OUT OF REACH OF CHILDREN
Robitussin A-C
EXPECTORANT, ANTIHISTAMINIC, COUGH SUPPRESSANT
Robitussin-DM
EXPECTORANT, COUGH SUPPRESSANT
Robitussin-PE
Cough Cal
Robitussin-DM
Cough Formula in
Convenient dissolving

# clear the tract with the

# Robitussin® Line

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

*For coughs of colds and "flu"*

**Robitussin®**

Each 5 cc. contains:

| | |
|---|---|
| Glyceryl guaiacolate | 100.0 mg. |

Alcohol, 3.5%

*For unproductive allergic coughs*

**Robitussin A-C®**

Each 5 cc. contains:

| | |
|---|---|
| Glyceryl guaiacolate | 100.0 mg. |
| Pheniramine maleate | 7.5 mg. |
| Codeine phosphate | 10.0 mg. |

(warning: may be habit forming)
Alcohol, 3.5%

*Non-narcotic for 6-8 hr. cough control*

**Robitussin-DM®**

Each 5 cc. contains:

| | |
|---|---|
| Glyceryl guaiacolate | 100.0 mg. |
| Dextromethorphan hydrobromide | 15.0 mg. |

Alcohol, 1.4%

*Clears sinuses and nasal stuffiness as it relieves cough*

**Robitussin-PE®**

Each 5 cc. contains:

| | |
|---|---|
| Glyceryl guaiacolate | 100.0 mg. |
| Phenylephrine hydrochloride | 10.0 mg. |

Alcohol, 1.4%

*Robitussin-DM in solid form for "coughs on the go"*

**Cough Calmers™**

Each Cough Calmer contains:

| | |
|---|---|
| Glyceryl guaiacolate | 50.0 mg. |
| Dextromethorphan hydrobromide | 7.5 mg. |

Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:

**Robitussin® extra benefit chart**

All 5 Robitussins have an EXPECTORANT-DEMULCENT action. Keep this handy chart as a guide in selecting the formula that provides the *extra* benefits you want for your patient.

| | Cough Suppressant | Antihistamine | Long-Acting (6-8 hours) | Nasal, Sinus Decongestant | Non-Narcotic |
|---|---|---|---|---|---|
| ROBITUSSIN® | | | | | ● |
| ROBITUSSIN A-C® | ● | ● | | | |
| ROBITUSSIN-DM® | ● | | ● | | ● |
| ROBITUSSIN-PE® | | | | ● | ● |
| COUGH CALMERS™ | AHR | | AHR | | AHR |

A. H. Robins Company, Richmond, Va. 23220 A-H-ROBINS

2
3
4
5
6

# he night shift of depression... insomnia

pression is a 24-hour-a-day problem. And insomnia is ten its nocturnal expression. In fact, insomnia may be a y symptom in establishing the diagnosis of depression.

AVIL HCl (Amitriptyline HCl, MSD) may prove quite lpful when you have arrived at such a diagnosis. Unlike ychic energizers or agents that merely elevate mood, AVIL HCl embodies a mild antianxiety action which anifests itself even before the fundamental antidepressant tivity of the drug becomes evident. Daytime drowsiness curs in some patients, usually within the first few ys of therapy.

TE: Not recommended during the acute recovery phase lowing myocardial infarction. Patients with cardiovascular sorders should be watched closely; arrhythmias, sinus chycardia, and prolongation of the conduction time have en reported, particularly with high doses; myocardial arction and stroke have been reported with drugs of this ss. Close supervision is required for hyperthyroid tients or those receiving thyroid medication. Concurrent ctroshock therapy may increase the hazards of therapy; ch treatment should be limited to patients for whom it is sential. Discontinue the drug several days before elective rgery if possible.

---

**traindications:** Known hypersensitivity. Should not be given comitantly with or within at least 14 days following the discontinuance monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl tiously with gradual increase in dosage until optimum response is eved. Not recommended during the acute recovery phase following cardial infarction or for patients under 12 years of age.
**nings:** May block the antihypertensive action of guanethidine or similarly ng compounds. Should be used with caution in patients with a history of ures or urinary retention, or with narrow-angle glaucoma or increased aocular pressure. Patients with cardiovascular disorders should be ched closely; arrhythmias, sinus tachycardia, and prolongation of the duction time have been reported, particularly with high doses; cardial infarction and stroke have been reported with drugs of this s. Close supervision is required for hyperthyroid patients or those eiving thyroid medication. May impair mental and/or physical abilities uired for performance of hazardous tasks, such as operating machinery riving a motor vehicle. Safe use during pregnancy and lactation has not n established; in pregnant patients, nursing mothers, or women who may ome pregnant, weigh possible benefits against possible hazards to her and child.
**autions:** When used to treat the depressive component of schizophrenia, hotic symptoms may be aggravated; in manic-depressive psychosis, essed patients may experience a shift toward the manic phase, and noid delusions, with or without associated hostility, may be ggerated; in any of these circumstances, it may be advisable to reduce dose of amitriptyline HCl, or to use a major tranquilizing drug, such as henazine, concurrently. When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.
**Adverse Reactions:** *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.
*Cardiovascular:* Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. *Anticholinergic:* Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. *Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. *Other:* Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. *Withdrawal Symptoms:* Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.
**How Supplied:** Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.
*For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486*

## when the diagnosis is depression

# ELAVIL® HCl
## (AMITRIPTYLINE HCl | MSD)

**MSD** MERCK SHARP & DOHME

CAPITAL NURSE REGISTRY

(Est. 1910)

Licensed
Practical
Nurses and
Practical
Nurses
Recommended
by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding
Registries, serving physicians
and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

*24 Hour Telephone Service*

RAndolph 3-2600 or 3-1771

"Registered Nurses—Licensed Practical Nurses"
for Private Duty

DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659–8040
Monday–Friday
8:30 a.m.–4:00 p.m.

Know this number:

626-2222

WHEN THIS NUMBER is called, Tuesday through Friday, 2 to 4 p.m., officers of the Narcotics Squad, Washington Metropolitan Police Department, will answer any questions about the illegal use of narcotics and will provide information regarding law enforcement and on civil commitment for users of narcotics.

New Nilcol-
A Comprehensive
Formula:

| DESCRIPTION | Contents in mg Tablet | Elixir—each 15 ml |
|---|---|---|
| phenylpropanolamine HCl | 50 | 25 |
| chlorpheniramine maleate | 4 | 2 |
| glyceryl guaiacolate | 200 | 100 |
| dextromethorphan HBr | 30 | 15 |
| alcohol | | 10% |

The scored, elliptical tablet is light violet. The elixir is deep violet in color and grape-flavored.

ACTIONS Each component of Nilcol has been selected to provide symptomatic relief of congestion and cough in upper respiratory disorders.

Phenylpropanolamine hydrochloride is a vasoconstrictor which reduces congestion of the nasopharyngeal mucosa. Chlorpheniramine maleate, a widely used antihistamine, helps to control allergic symptoms. The expectorant is glyceryl guaiacolate which helps to increase the secretion and decrease the viscosity of fluids of the respiratory tract. Dextromethorphan is a well-known, centrally acting antitussive. Nilcol may minimize the need for topical decongestants.

INDICATIONS Nilcol is indicated for nasal and bronchial congestion; coughs and other symptoms of respiratory infections including influenza and the common cold; other respiratory conditions such as sinusitis, allergic rhinitis or hay fever.

CONTRAINDICATION Hypersensitivity to any ingredient.

PRECAUTIONS Because of the possibility of drowsiness, patients should be cautioned against driving and operating machinery. Administer with caution to patients with hyperthyroidism, hypertensive cardiovascular disease, diabetes mellitus and liver disease. Use in pregnancy is not recommended.

ADVERSE REACTIONS Anxiety, restlessness, tension, insomnia, tremor, weakness, headache, vertigo, sweating, nausea, and vomiting may possibly occur.

SUPPLIED Tablets in bottles of 100. Elixir in bottles of 32 fl oz (1 qt) with dosage cups. N-GP-11-4C

WARNER-CHILCOTT
Morris Plains, New Jersey 07950

This is a test of this publication's advertising "Exposure." Please see below.

# Introducing The Fully Therapeutic "Age-Calibrated" Non-Narcotic Cough/Cold Formula... For Any Member Of The Family*

*Not for infants under 2 years of age.

# New Nilcol™ Rx Tablets/Elixir

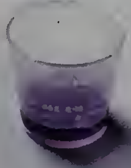
ch scored tablet contains: Phenylpropanolamine HCl 50 mg, Chlorpheniramine maleate 4 mg, Glyceryl guaiacolate 200 mg, Dextromethorphan HBr 30 mg.
ch 15 ml of elixir contains: Phenylpropanolamine HCl 25 mg, Chlorpheniramine maleate 2 mg, Glyceryl guaiacalate 100 mg, Dextromethorphan HBr 15 mg, alcohol 10%.

## An Expectorant • An Antihistamine
## A Decongestant • A Non-Narcotic Antitussive

---

For a complimentary package, send your Rx with the name Nilcol written on it to:
Warner-Chilcott Laboratories, 201 Tabor Road, Morris Plains, New Jersey 07950.
Att: M. Adams, St.J.

---

| | | | | |
|---|---|---|---|---|
| | | | | |
| Prescribe<br>or 4 times daily | youngsters 2 to 4 | youngsters 4 to 6 | youngsters 6 to 12 | grown-ups |
| ick-Snap-Apart<br>**Tablets** | | | <br>½ tablet | <br>one tablet |
| Delicious,<br>rape-Flavored<br>**Elixir** |  †<br>5 ml (1 tsp) | <br>10 ml (2 tsp) | <br>½ oz (1 tbs) | <br>1 oz (2 tbs) |
| Rx (4 days —<br>waste therapy) | 3 oz | 6 oz | 8 oz | 16 oz |

†Plus "Age-Calibrated" Medicine Cup for Precision-Assured Dosage.

# Where has all the money gone?

It just goes.

You shake your head.

You see it slip out of your hands and you worry.

Instead of worrying, why not do something about your money? Save some. Painlessly.

Join the Payroll Savings Plan where you work.

Your money will add up faster than ever before, because now there's a bonus interest rate on all U.S. Savings Bonds. Now E Bonds pay 5½% when held to maturity of 5 years, 10 months (4% the first year). That extra ½%, payable as a bonus at maturity, applies to all Bonds issued since June 1, 1970 . . . with a comparable improvement for all older Bonds.

Get a grip on your money the Payroll Savings way. It's an easy way to see your money grow instead of go.

50
THE UNITED STATES OF AMERICA
FIFTY DOLLARS
50
SERIES E
L 0 000 000 000 E

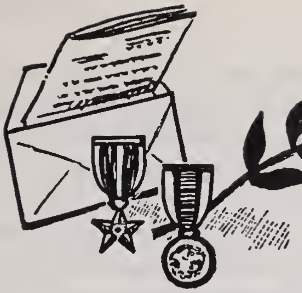
Bonds are safe. If lost, stolen, or destroyed, we replace them. When needed, they can be cashed at your bank. Tax may be deferred until redemption. And always remember, Bonds are a proud way to save.

UNITED STATES SAVINGS BONDS

## Take stock in America.

Now Bonds pay a bonus at maturity.

The U.S. Government does not pay for this advertisement. It is presented as a public service in cooperation with The Department of the Treasury and The Advertising Council.



# News & Personals

## SUMMARY OF EXECUTIVE BOARD ACTIONS

### Proceedings of the December 14 meeting

For the last dinner meeting of the year members of the Executive Board were invited to the home of the Chairman, Dr. Robert J. Coffey. Present were Drs. Henry D. Ecker, William S. McCune, Frank S. Pellegrini, Marvin C. Korengold, Howard Katzman, James E. Boland, John J. Hughes, C. Willard Camalier, Jr., and Mr. Thomas Sadler, Secretary. The meeting was called to order at 8:55 p.m. by Dr. Coffey.

The minutes of the November 23 Board meeting were approved as submitted.

**Committee Meetings**: The Secretary reported the following committees had met since the last meeting of the Board:

| | | |
|---|---|---|
| November | 24 | Health Foundation |
| December | 3 | Drug Dependency<br>Physician Placement<br>Medical bureau<br>Medical Ethics & Professional Conduct |
| | 4 | Scientific Assembly |
| | 7 | Alcoholism |
| | 8 | Board of Credentials |
| | 11 | Utilization |
| | 14 | Allied Professions |

**Board of Credentials**: On recommendation of the Board of Credentials 2 applicants were elected to Active membership. Their names appear on page 145. Approval was given to the following changes in membership status:

*Transfers*

*Active to Associate:* Robert H. DeWitt and Kannarkat Verghese

*Resident-Intern to Active:* Ralph Lew

*Resignations*

*Active: Arthur Egelman*

*Associate:* Edward J. Grass, Howard P. Parker, James A. Halsted, Gerald M. Fenichel and William O. Bailey

Having fulfilled the requirements of the Constitution and By-laws, the following members were confirmed as *Life Members:* Aloysius Connolly, Samuel Dessoff, Stuart Foster, Harry Friedenbert, Charles Geschickter, Clayton Hawfield, Edward B. Kelly, Lewis Klein, John B. Marbury, L. Conner Moss, Anna Neumann, Julius Neviaser, James Nolan, Gilbert Ottenberg, Norman Paul, L. Lewis Sandler, Aaron Schwartzman, Ernest Sheppard, Leland Stevenson, J. Ogle Warfield, and Alfred Wilson.

**1971 Committee Chairman and Members**: A motion was made and carried to approve the listing of 1971 chairmen and committee members as submitted by Dr. Korengold.

**Society Offices Staffing**: A motion was made and carried that Mr. Francisco P. Ferraraccio be appointed managing editor of Medical Annals effective January 1, 1971.

### Other Business

1. The Board had reviewed earlier the December 3 letter from Dr. Harvey Ammerman regarding the Professional Negligence Review Panel. This Peer Review would be available to the Society's Professional Liability Insurance Carrier and would consist of Society members representing all specialties who would offer expert opinion on any proposed malpractice suits provided that the individuals rendering such opinions do not become subject to subpoena. A motion was made and carried to endorse, in principle, the establishment of a Professional Negligence Review Panel as outlined in Dr. Ammerman's letter, but to defer any action pending determination by our new attorney that members of such a panel would not be subject to subpoena.

2. Following a report by Dr. Coffey that the Legal counsel Subcommittee had reviewed the proposed contract for Mr. John Lewis Smith III, a motion was made and carried to approve the contract of Mr. Smith as legal counsel effective January 1, 1971.

3. Dr. Pellegrini reported that the Society was successful in its efforts regarding the D.C. Revenue

Act. Physicians and other professional groups will continue to be exempt from the Unincorporated Business Tax.

4. A motion was made and carried to deny a request for using the Society roster to send letters to members for political purposes. The position taken by the Executive Board in April 1968 that Society roster not be used in connection with any political campaign was reiterated.

5. Regarding a request by Dr. Howard Ticktin for Board action on the proposed McLean Gardens Complex, a motion was made and carried that Dr. Ticktin be advised that it is a long standing policy of the Medical Society of the District of Columbia to take no action on any contemplated or projected hospital facility in the District of Columbia.

6. Dr. Hughes elaborated on the request submitted by the Section on Endocrinology urging Board approval of a resolution. A motion was made and carried to accept the resolution "that at this time, no change need be made in the present criteria for the use of oral agents in the management of diabetic patients."

7. Dr. Coffey paid tribute to Dr. Howard Katzman, outgoing First Vice-President, for his excellent contributions to the Executive Board.

8. As an expression of appreciation, a check was presented to Mr. Thomas Sadler on completion of his third year as Executive Director.

9. The Board made a request that Mr. Sadler send a floral arrangement to Dr. Frank Bacon as an expression of its best wishes for his early recovery from his recent surgery.

There being no further business, the meeting was adjourned at 10:45 p.m.

---

# ►D.C. HEALTH NOTES

## "Potomac Pollution and the People"

**The polluted condition of the Potomac River** has been the subject of endless newspaper and magazine stories. The plight of the historic river has been documented on television, and the subject has received the full treatment at endless cocktail parties and meetings.

When looking out at the famed body of water in the shadow of the Nation's Capitol it is hard to imagine that the Potomac was ever clean, clear and a thing of beauty. But it was so, at least when Captain John Smith sailed his ship up to little Falls on June 16, 1608.

Historians point out that Captain Smith was overwhelmed by what he saw—the purity of the water, the scenic splendor and the enormous number of fish leaping from the surface of the water.

What happened to the Potomac after Smith's pleasant encounter, and what is happening today, is the subject of an excellent brochure published by the D.C. Health Services Administration.

Called "Potomac Pollution and the People", the publication traces the history of the river, revealing with pictures and text the struggle to keep the waters clean and the scenery intact for generations to come.

Attempts were made to educate the public and to legislate action. The failure of these attempts is documented. The reader is encouaged to call for new action and for new ways of getting the job done before it's too late.

The booklet points out that "The quality of our environment is deteriorating. People are becoming impatient. We have used and abused the river.

"No longer can a polluted Potomac be considered as a health problem or a conservation problem, or an economic problem or an engineering problem. It is a problem of the people and must be solved," the booklet states.

Historically, the early settlers had other plans for the Potomac River. It was once considered as a possible route to the Far East. When that plan proved futile, the river was supposed to play an important role as part of a massive transportation complex which would include canals, turnpikes, and later railroads. This dream didn't come true, either, because the railroads eventually won out.

Although the grand plans for a transportation mecca did not materialize, business along the Potomac's banks thrived. The lower river was alive with skipjacks, like the ones still seen on the Chesapeake Bay. Large vessels of the tobacco fleet loaded at the plantation wharves at the merchant towns of Alexandria and Georgetown. Large nets of herring and shad were pulled ashore and hauled to the markets.

After 1865 the Nation emerged as a great power, and with industrialization and growth the river began to show signs of neglect—it became the river of despair.

The Capital City with its growing population added its toll to the dying river.

In the City of Washington, the water supply from springs and wells was inadequate and often contaminated by privies, barns and stables. Open sewers carried "noxious odors and vapors" that affected the health of the citizens. Health incidents, occurring regularly, aroused the Congress and the people. A wave of sickness caused by "gasses" from an obstructed sewer hit the old National Hotel.

All over the city, open-brick conduits carrying sewage into the Potomac were an eyesore and a health hazard. The river banks were clogged with silt brought down each spring with the floods and, filled with refuse, became a malarial marsh.

The Congress and the people began to look at the deteriorating river and tried to tidy it up. The Army Engineers reclaimed many acres of land along the waterfront by dredging and filling the swamps. One of their master projects was the creation of the Tidal Basin. They also improved the water supply system which had ben installed in 1859.

The need for sewers increased with the population growth. In 1874 there were 80 miles of sewers in the city. They drained into creeks, and the sewage very quickly found its way into the Potomac.

President Harrison became aware of the situation and appointed a board of engineers to plan an adequate sewer system. While the talks went on, the river became worse.

In an address to the Medical Society of the District of Columbia in 1894, Dr. John Shaw Billings of the Army Surgeon General's Office reported: "At certain times of the year, the river water is so loaded with sediment as to be unfit for bathing as well as for drinking and cooking purposes; it contains fecal bacilli at all times, although these are probably for the most part derived from the excreta of horses and cattle and not of man. And it is probably, although not proven, that it at times contains organisms or substances capable of producing diarrhea in persons not accustomed to its use, and the typhoid bacillus is not absolutely excluded from it."

From 1881 to 1909 Washington had an average of 200 deaths a year from typhoid fever.

From the mountains of the upper Potomac region there was another continuing problem. Water that settled in the mines built up and ran off into the river, and the poisoned water helped to further destroy the river and kill the fish. This leaching from the mine pits hampered the river from making a natural recovery from the damage. Industries along the river also added their measure of pollution.

In 1907 the U. S. Department of the Interior reported that "industries polluted the stream–leather tanning, wood pulp, ammonia, wool scouring, dying, and the manufacturing of whisky."

Although the industries mentioned above have long gone, some offenders are still present. And there is still the problem of improper and inadequate sewage treatment facilities. But there is some light at the end of the tunnel. Efforts are now underway to restore the beauty and usefulness of the Potomac. In 1965 the Federal Water Pollution Control Act was passed. Four years later, in 1969, the Department of Public Health's "Water Quality Criteria–Implementation and Enforcement Plan for the District of Columbia, Potomac River and Tributaries" was approved by the U. S. Department of the Interior. The criteria provide that the water of the Potomac shall at all times be free of pollutants.

Awareness on the part of lawmakers and appropriate legislation are steps in the right direction, the booklet points out, but there is still a long way to go before the once beautiful Potomac River can be restored to its full potential as a source of recreation and water supply for a rapidly expanding population.

Copies of the "Potomac Pollution and the People" can be obtained by calling or writing the Health Education and Information Division, D.C. Health Services Administration, 1875 Connecticut Avenue, N.W., Washington, D. C. 20009, Room 415. Telephone 629-3641.

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*

## ►DOCPAC BRIEFS

The entire membership of the Medical Society should be aware that your Political Action Committee, DOCPAC, aided greatly in helping the omnibus revenue measure for the fiscal year 1970 of the District of Columbia Government pass. This bill was stuck in several committees and through the political efforts of DOCPAC, H.R. 19885 was passed by both houses of congress, signed by the President, and now George Washington University Medical School and Georgetown University Medical and dental Schools have received grants totaling 6.2 million dollars for the fiscal year 1971 and similar amounts in 1972.

This was a most important measure to help the medical schools here. This is one *concrete* way that your Political Committee, DOCPAC, has helped.

If you are not a member, join now. Send your dues, $30, to DOCPAC, 825 New Hampshire Avenue, NW, Washington, D.C. 20037.

WILLIAM H. COOPER, M.D.
*Chairman, D.C. Political Action Committee*

## Clinical Center Studies

The cooperation of physicians is requested in the referral of patients for clinical studies on the treatment of patients with metastatic carcinoma of the breast, being conducted by the National Cancer Institute's Solid Tumor Service at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients with recurrent tumor within three years of their mastectomy, who have received no prior chemotherapy, with evidence of metastatic disease in their lungs, pleura, or skin are particularly suitable for study. Prior local X-irradiation treatment will not exclude patients from consideration. Premenopausal patients with recurrent disease should first have had oophorectomy and found to be nonresponsive or to have relapsed after endocrine manipulation before they will be eligible for study.

Upon completion of their studies, patients will be returned to the care of the referring physician, who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may write or telephone: Dr. Vincent T. DeVita, Jr., Clinical Center, Room 12-N-226 National Institutes of Health, Bethesda, Maryland 20014 Telephone: (301) 496-4916 or Dr. Robert C. Young, Clinical Center, Room 4-B-13 Telephone: (301) 496-2031.

---

The cooperation of physicians is requested in the referral of patients for clinical studies of reticulum cell sarcoma, being conducted by the National Cancer Institute's Solid Tumor Service at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Of particular interest are previously untreated patients with advanced disease. Upon completion of their studies, patients will be returned to the care of the referring physician, who ill receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may call, or write and submit slides of the pathologic specimens to Dr. Vincent T. DeVita, Jr., Clinical Center, Room 12-N-226 National Institutes of Health, Bethesda, Maryland 20014 Telephone: 301-496-4916 or Dr. Robert C. Young, Clinical Center, Room 4-B-13 National Institutes of Health, Bethesda, Maryland 20014 Telephone: 301-496-2031.

---

The cooperation of physicians is requested in the referral of patients for a controlled clinical trial to evaluate treatment of patients with disseminated lymphomas, particularly Hodgkin's disease, being conducted by the National Cancer Institute's Solid Tumor Service at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Previously untreated patients with stage IIIB or IV Hodgkin's disease or stage III and IV lymphosarcoma are needed for this study. Patients relapsing after limited radiotherapy are also eligible for the treatment program.

Upon completion of their studies, patients will be returned to the care of the referring physician, who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may write or telephone: Dr. Vincent T. DeVita, Jr., Clinical Center, Room 12-N-226 National Institutes of Health Bethesda, Maryland 20014 Telephone: (301) 496-4916 or Dr. Robert C. Young, Clinical Center, Room 4-B-13 National Institutes of Health, Bethesda, Maryland 20014 Telephone: (301) 496-2031.

---

## ►OVER THE DESK

### Bell's Palsy Survey

Dear Practicing Physician:

I have been impressed by the fact that I see more cases of Bell's Palsy during the fall season than at any time of the year. From an epidemiological point of view it would be important to ascertain if my impression is correct.

Would you please indicate below the number of cases of Bell's Palsy you have seen in each season of the year and mail your answer to me.

Thank you,
Joseph A. Sabri, M.D.
1780 Massachusetts Ave., N.W.
Washington, D.C. 20036

| | No. of Cases of Bell's Palsy |
|---|---|
| Sept.–Dec. | |
| Dec.–March | |
| March–June | |
| June–Sept. | |

## 1971 AMA MEETING DATES

February 15-16: Congress on Medical Education, Palmer House, Chicago

February 16-17: Symposium on Computer Systems in Medicine, Flamingo Hotel, Las Vegas

March 18-20: Medicolegal Symposium, Americana Hotel, New York

March 25-26: National Conference on Rural Health, Marriott Motor Hotel, Atlanta

April 2-3: National Congress on the Socio-Economics of Health Care, Caesar's Palace, Las Vegas

April 26-27: Congress on Environmental Health, Essex House, New York

May 13-15: National Conference on Patient Safety, Palmer House, Chicago

May 21-22: National Conference on Peer Review, La Salle Hotel, Chicago

June 20-24: ANNUAL CONVENTION, Atlantic City

August 28 September 2: Western Hemisphere Nutrition Conference, Americana Hotel, Miami Beach

August 29-30: Congress on Occupational Health, Jackson Lake Lodge, Grand Teton National Park, Wyo.

September 23-35: Annual Conference of State Mental Health Representatives, Chicago

September 30-October 2: National Conference on Physicians and Schools, Chicago

November 28-December 1: CLINICAL CONVENTION, New Orleans

## NEW MEMBERS

### Active

HABIBOLLAH FARHOUDI, M.D. Office: D. C. General Hospital. Born in Shiraz, Iran. Medical degree: Pahlavi University, 1963. Specialty: Internal Medicine

KRISHAN GUPTA, M.D. Office: 14th & W Streets, S. E. Born in New Delhi, India. Medical degree: All India Institute, 1965. Specialty: General Practice

## MEETINGS

The Fourteenth Annual Joint Cardiac Symposium of the Washington Heart Association and the Heart Association of Northern Virginia, Inc., will be held at the Marriott Twin Bridges Motor Hotel (Persian Room) in Arlington, Virginia on Wednesday, April 7, 1971 from 9 a.m. to 3:30 p. m.

**MEETINGS, SEMINARS in refreshing country-estate atmosphere. Golf, tennis, lakes. Versatile new conference facilities for up to 250. Dining in historic Old Mill Room, new Tack Room (cocktails).**

*Write for Meetings Portfolio or call 703-296-2181.*

**THE BOAR'S HEAD INN**
**Charlottesville, Virginia**

# GENERAL NEWS

The **Andrew W. Mellon Foundation has awarded $300,000** to Georgetown University for support of increased enrollments in its School of Medicine.

Several months ago, **Georgetown's School of Medicine** announced plans to almost double the size of its enrollment over a five-year period. The expansion is supported in part by an $8.5 million grant from the Physician's Augmentation Program of the National Institutes of Health.

The first year enrollment was increased from 121 to 175 in the fall of 1970, and will rise to 205 freshmen students in September 1971. The total enrollment of the medical school will increase from a previous high of 446 students to 820 students by 1975.

The Andrew W. Mellon Foundation, based in New York City, supports the arts, community services, conservation, education and medicine. It is named for the late Andrew W. Mellon, who served as Secretary of the Treasury from 1920 to 1932, and later as Ambassador to the Court of St. James.

The **George Washington University Medical Center** is expanding its surgical research laboratory and has appointed **Dr. William L. Joseph** to direct it. Dr. Joseph, most recently staff surgeon and senior investigator of the National Cancer Institutes' surgery branch at N.I.H., is a graduate of Ohio State University and its School of Medicine.

The surgical research laboratory in George Washington's Warwick Research Building includes two operating rooms that have been renovated and enlarged, other support services, and an animal facility.

According to Dr. Paul Adkins, Chairman of the Department of Surgery, plans are being formulated to house primates as well as other large animals. Current studies in tissue compatibility for organ transplantation will be persued in the research laboratory.

**Dr. James W. Humphreys, Jr.**, a retired Air Force Major General, has been named to the new National Aeronautics and Space Administration position of director of life sciences in the **Office of Manned Space Flight**. While in the Air Force Dr. Humphreys served NASA as director of space medicine for manned flight.

**Dr. Samuel M. Fox III** was appointed Professor of Medicine at the **George Washington University School of Medicine** on December 1, 1970. He was formerly Chief of the Heart Disease and Stroke Control Program of the U.S. Public Health Service. He has had a long and distinguished career in government service, having also been Assistant Director of the National Heart Institute at N.I.H. He has held academic posts in Cairo, Egypt, at the University of Pennsylvania, and at Georgetown University.

A fellow of the American College of Cardiology, he has served as a member of the Board of Trustees, as well as in numerous other professional capacities. He is also a Fellow of the American College of Physicians and a member of the Board of Directors of the American Heart Association. His national and international professional organizations include membership on the President's Council on Physical Fitness and Sports, the International and Asian-Pacific Societies of Cardiology and committees of the National Research Council.

A graduate of Haverford College, Dr. Fox received his medical degree from the University of Pennsylvania.

**Georgetown University** recently dedicated its new, three-story Medical Center Library (cover photo). The facility, named the **John Vinton Dahlgren Memorial Library** for one of the University's most generous benefactors, was built at a cost of $1.2 million. It occupies more than 30,000 square feet of space and has a stack capacity for 85,000 volumes, subscriptions to over 1,100 scientific journals, a seating capacity of over 400, and reading and service areas. In addition to the general collection of books and journals in medicine, dentistry, nursing and the allied health sciences, the library has a unique and valuable collection of rare books, the earliest of which dates from 1526.

**Ever have the feeling that your internal "clock" was out of whack** after a long flight over several time zones?

A recent small-scale study by the Army Medical Research and Development Command shows that soldier's performance and memory suffers for at least three days after their arrival from six time zones away.

In this pilot study, reported in the Newsletter of the Department, men were given a complex math test before and after flights to Thailand and Japan from Washington, D.C. The after-flight tests showed a decrease in accuracy for 72 hours or more.

**George E. Hamilton III** has been elected **President of the Board of Directors of Children's Hospital.** His election was announced following the Hospital Board's meeting held Wednesday, December 16, 1970. He succeeds Wallace Werble who has served as President of Children's from 1964 to the present. Mr. Hamilton is a member of the law firm Hamilton and Hamilton, with whom he has practiced in Washington since 1955. He is also President and Director of the Darts Soccer Club. He previously served the Hospital as Trustee and General Counsel, and has held the post of First Vice President since 1968. He has been a member of the Board since 1960. He is also a Trustee and General Counsel to the American Cancer Society, D. C. Division.

Mr. Hamilton is a graduate of Georgetown University, from which he received his LL. B. in 1952. He is a grandson of R. T. Merrick, one of the original founders of Children's Hospital.

The Board also announced the election of two new Board members: **Mr. S. Parker Oliphant,** Treasurer and Project Manager at the Wm. P. Lipscomb Co., Inc. and a Partner in Mills, Oliphant and Truland, and **Dr. Judson G. Randolph,** Surgeon-in-Chief of Children's Hospital, and Professor of Surgery at George Washington University.

**AMA Drug Evaluation,** a new all-in-one **reference book** of authorative, objective prescribing information on the drugs most commonly used by physicians, as well as new drugs and those in the official drug handbooks, has been published by the American Medical Association.

Distribution will begin early in 1971 to all dues-paying members of the AMA as part of their membership benefits. Additional copies may be obtained from the AMA to non-members at $15 per copy, with reduced rates for students and for bulk shipment orders.

The 1,040-page guide covers more than 1,200 single entity drugs and mixtures. It describes the uses, adverse reactions, dosage, preparations and supplier for each drug.

**Dr. Morris Feitel** has been re-elected for a second term as **Chairman of the Medical Staff of Children's Hospital.** He has previously served as Secretary-Treasurer of the Medical Staff of Children's. His private practice is in Laurel, Maryland. Re-elected to serve with Dr. Feitel were **Dr. Marshall B. Parks,** Chairman of the Department of Opthalmology at Children's and **Dr. Beale H. Ong,** pediatrician and neurologist.

**A Selected Bibliography on Death and Dying,** a reference volume for those who counsel the terminal patient has been published by the National Institutes of Child Health and Human Development (NICHHS). The entries range from scientific research studies to general articles that will help the terminal patients' family and friends.

Free copies may be obtained from the Information office of the National Institute of Child Health and Human Development, Building 31, Room 2A-49, National Institutes of Health, Bethesda, Maryland 20014.

The 1970 edition of the **Socio-Economic Handbook** is available for $2.50 from the American Society of Internal Medicine, 525 the Hearst Building, 3rd and Market, San Francisco 94103.

This handbook is intended to aid in bridging the information gap between formal training for internal practice and the actual practice of the specialty.

At the 1970 Annual Meeting of the District of Columbia Society of Internal Medicine, **Dr. Irving Burka** was elected President-elect to begin his term in July 1971.

**Dr. Robert J. McKay, Jr.,** Professor and Chairman of the Department of Pediatrics at the University of Vermont college of Medicine, was installed as **president of the American Academy of Pediatrics for 1971.**

**Dr. Robert B. Nelson** has been elected **President of the Washington Hospital Center's Medical Board.** He succeeds Dr. Jack J. Rhinegold, who retires after two years in the post.

Dr. Nelson, who has been associated with the Hospital Center since it opened in 1958, has also served as Administrative Chairman of the Department of Obstetrics and Gynecology. He has been Chairman of the Medical Advisory Board of the Planned Parenthood Association of Metropolitan Washington since 1967.

A resident of Bethesda, Dr. Nelson is a graduate of the University of Virginia and received his medical degree from the University of Virginia Medical School.

Also elected officers of the Medical Board were **Dr. Wesley M. Oler,** First Vice President; **Dr. Arthur Dick,** Second Vice President; **Dr. Alexander Russell,** Secretary; **Dr. Milton W. Werthmann,** Assistant Secretary and **Dr. Lawrence A. Rapee,** Treasurer.

bp
KONSYL
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
PLANTAGO OVATA COATING
MADE BY
BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 12 OZ.
bp
L.A.
FORMULA
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
MADE BY
BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 14 OZ.

Sugar-free medication for the obese patient.

For the patient who requires maximum palatability.

the safe,
effective ways to promote
normal peristalsis

*in the treatment of constipation or diarrhea*

**Burton, Parsons & Co., Inc.** *Manufacturers of Ethical Pharmaceuticals Since 1885*
▪ WASHINGTON, DC. 20027 ▪ MONTREAL, CANADA ▪ MUNICH, GERMANY

sterile solution (300 mg per ml.)

**Consider Lincocin®**

(lincomycin hydrochloride, Upjohn)

10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
2cc. Sterile Solution No. 80
Lincocin®
(lincomycin hydrochloride injection)

and single-dose 2 ml.
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials...

he Upjohn Company JA70-9835 MED B-4-S (KZL-5)

**Upjohn** THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 49001

# You can't fell a redwood with a hatchet

**With vitamins, too, relative needs determine the choice.**

A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a *high potency formula* will do.

THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.

**Theragran®**
**High Potency Vitamin Formula**

**Theragran®-M**
**High Potency Vitamin Formula with Minerals**

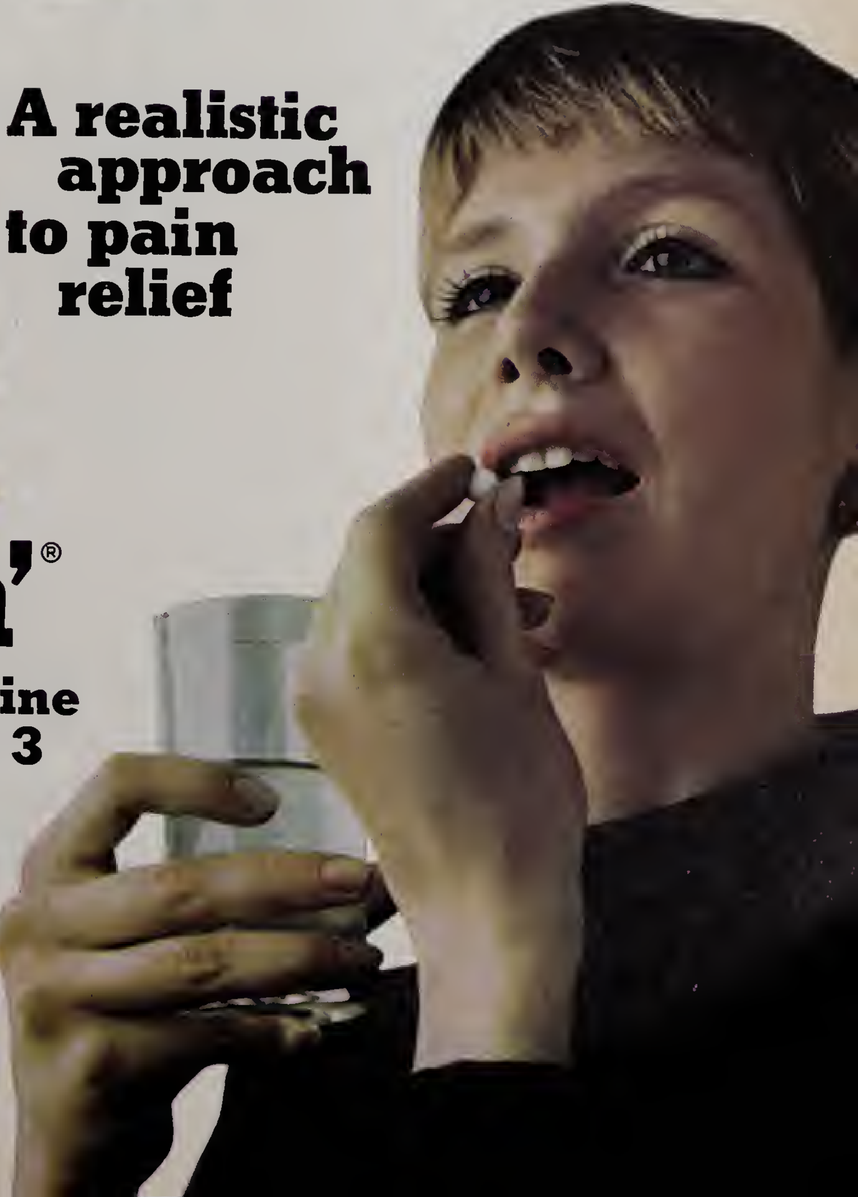
**SQUIBB**
'The Priceless Ingredient of every product is the honor and integrity of its maker.'™

© E.R. Squibb & Sons, Inc. 1970

once-popular treatment for back pains
as to have the seventh son of a seventh son
and or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

r headache, a sovereign remedy was
wear a snakeskin round one's head.



# A realistic approach to pain relief

# Empirin'®

## ompound with Codeine
## hosphate gr. 1/2 No. 3

h tablet contains:
deine Phosphate gr. 1/2 (Warning—
y be habit forming), Phenacetin gr. 2 1/2,
pirin gr. 3 1/2, Caffeine gr. 1/2.

## eeps the promise
## pain relief

. & Co.' narcotic products are
s "B", and as such are available on oral
cription, where State law permits.

**BURROUGHS WELLCOME & CO. (U.S.A.) INC.**
**Tuckahoe, N.Y.**

# the incomplete B-complex

SPECIFICALLY FOR LEVODOPA PATIENTS—NUTRITIONAL SUPPORT WITHOUT PYRIDOXIN

Larobec provides: B-complex vitamins, of particular importance to the patient who is on levodopa therapy and is deficient in water-soluble vitamins.

Larobec provides: Ascorbic acid, useful in assisting tissue repair in the debilitated patient.

Larobec does *not* provide: Pyridoxine (vitamin $B_6$)—whi reportedly reverses the antiparkinson effects of levodopa therapy.[1,2]

## Larobec T.M. Tablets

A high-potency nutritional supplement specific to the needs of patients with Parkinson's disease and syndrome on levodopa therapy—that describes new LarobecT.M. from Roche. Larobec provides the major B vitamins plus vitamin C—*but does not provide pyridoxine*. Thus, with its specially tailored formula, Larobec assures the patient important nutritional support without minimizing any of the benefits of levodopa therapy.

1. Duvoisin, R. C.; Yahr, M.D., and Coté, L. D.: *Trans. Amer. Neurol. Assoc., 94*:81, 1969.
2. Cotzias, G. C.: *J.A.M.A., 210*:1255, 1969.

**Complete Prescribing Information:**
Each Larobec tablet contains:

| | |
|---|---|
| Thiamine mononitrate (vitamin $B_1$) | 15 mg |
| Riboflavin (vitamin $B_2$) | 15 mg |
| Niacinamide | 100 mg |
| Calcium pantothenate | 20 mg |
| Cyanocobalamin (vitamin $B_{12}$) | 5 mcg |
| Folic acid | 0.5 mg |
| Ascorbic acid (vitamin C) | 500 mg |

**Description:** For prophylactic or therapeutic nutritional supplementation concomitant with levodopa therapy in patients with Parkinson's disease and syndrome, Larobec provides high potency dosages of the major B-complex vitamins, without pyridoxine (vitamin $B_6$) which has been reported[1,2] to reduce the clinical benefits of levodopa therapy. B-complex vitamins are essential in the anabolism of carbohydrate and protein and in hematopoiesis. Larobec also contains therapeutic quantities of ascorbic acid, a substance involved in intracellular reactions such as tissue repair and collagen formation.

**Indications:** Larobec is indicated for supportive nutritional supplementation when a water-soluble vitamin formula (without pyridoxine) is required prophylactically or therapeutically in patients under treatment with levodopa.

**Warning:** Administration of vitamin $B_6$ may be required if signs of pyridoxine deficiency develop. Larobec is not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin $B_{12}$.

**Dosage and Administration:** One or two tablets daily, as indicated by clinical need.

**How Supplied:** Orange-colored, capsule-shaped tablets, imprinted Roche 73; bottles of 100.

**References:**
1. Duvoisin, R. C., *et al.*: *Trans. Amer. Neurol. Assoc., 94*: 81, 1969.
2. Cotzias, G. C.: *J.A.M.A., 210*:1255, 1969.

**high-potency nutritional support for the levodopa patient**

**Larobec** T.M.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

**DataMedics**

**The result is total management control & increased cash flow**

DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:
- Billing
- Bookkeeping
- Collecting delinquent accounts
- Designing offices
- Leasing equipment
- Preparing insurance claim data
- Preparing payroll tax data
- Recruiting personnel
- Training personnel

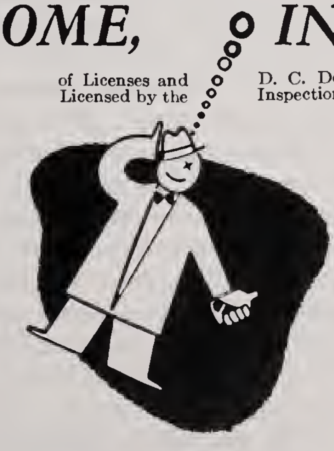
**How?**
Consultation by appointment.

DM

**DataMedics, Inc.**
**National Headquarters**
**7979 Old Georgetown Road**
**Washington, D.C. 20014**
**(301) 654-7666**
**Cable/Medic**
**Baltimore (301) 792-4424**

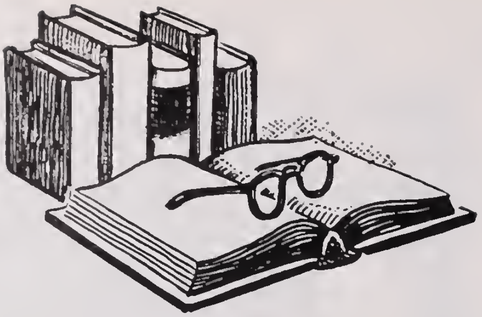
*KALORAMA CONVALESCENT HOME, INC.*

Licensed by the D. C. Department of Licenses and Inspections



INSTITUTIONAL CARE
for the medical management of the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063



# Book Reviews

**Synopsis of Dermatology**, 2nd ed. WILLIAM D. STEWART, M. D., JULIUS L. DANTO, M. D., and STUART MADDIN, M. D. Price $13.85. Pp. 445, with 193 illustrations and 49 color plates. St. Louis: Mosby, 1970.

This is an excellent synopsis of dermatology. It is concise and to the point and very descriptive of the condition. The illustrations are fine.

This is not only a good book for a dermatologist, but for any general practitioner, and especially of value in a clinic that is engaged in teaching dermatology.

E. E. BARKSDALE, M. D.

---

**Congenital and Pediatric Glaucomas.** ROBERT N. SHAFFER, M.D. and DANIEL I. WEISS, M.D. Price, $20.50. Pp. 213, with 6 pages of index added, 2 color plates, and 251 photographs, microphotographs, and anatomical drawings. St. Louis: Mosby, 1970.

This short volume appropriately is dedicated by the authors to children. Its photographs, fluorescein angiograms, photomicrographs, and diagrams are depicted in an excellent manner with explanatory sub-statements easily read and identified. As pointed out in the book's preface, the advanced signs and symptoms of glaucoma in the infant are easily recognized. The condition is obvious to both physician and parent alike. This fact prompts immediate treatment. However, in children beyond 1 year of age, symptoms of glaucoma are usually few and negligible until severe visual impairment has taken place. A strong plea is made by the authors for the early recognition of signs and symptoms of glaucoma in the infant—in particular, the cupped disc—by the ophthalmologist, the pediatrician and the optometrist.

The book has been meticulously prepared and presented in 4 sections under the titles of general principles, genetically determined glaucoma, non-genetic glaucoma, therapy.

The first section is primarily concerned with classification, fundamental considerations, and the authors' effective and welcome suggestions regarding examination of the infant and the active child. Methods of diagnostic techniques are well presented.

The second section discussed thoroughly the subject of diagnosis and differential diagnosis in primary congenital glaucoma. Early and late signs and symptoms are described in addition to the subject of rare syndromes complicated by glaucoma. The clinical characteristics of phakomatoses, mesodermal and iris anomalies, and metabolic diseases associated with glaucoma are also discussed in minute detail.

The third section, on non-genetic glaucoma, embodies a presentation of the glaucomas which arise from extrinsic sources such as inflammation, trauma, or ocular tumors. A complete chapter in this third section is concerned exclusively with prenatal rubella infection. Such infection, we are informed, can produce a glaucoma indistinguishable clinically from congenital glaucoma, and rubella cataract.

The fourth and final section is a presentation of the advantages of medical and surgical therapy of congenital glaucoma. Following a discussion of other surgical procedures, the operation of goniotomy is described step-by-step with excellent explanatory photographs and microphotographs. As the authors rightly point out, the percentage of successful goniotomies performed early in life is directly proportional to very early diagnosis and operation. The effectiveness of such an operation is markedly reduced after the age of 1 year. In a group of 120 unselected cases of infantile glaucoma, Shaffer and Weiss have attained a remarkable 85% success following goniotomy. Strong recommendation is made by them that, in the performance of this operation, the incision of the trabecular meshwork be done under a contact lens with adequate visual control of both location and depth of incision. By relative comparisons of realistic photomicrographs the authors adequately prove their point that a goniotomy performed under direct contact lens visualization is far superior in successful results obtained to a "blind" operative procedure.

This book is enthusiastically recommended to all concerned with the preservation of eyesight—the opthalmologist, the pediatrician, and the knowledgeable optometrist.

THOMAS A. EGAN, M.D.

**Current Dermatologic Management.** Edited by STUART MADDIN, M. D., with 177 contributors. Price, $38.75. Pp.330, with 70 color plates. St. Louis: Mosby, 1970.

It is refreshing to peruse a truly current textbook. The contributors offer an international composite of eminent clinicians and researchers. Many are authors in their subspecialty fields. Included are non-dermatologists whose expertise with systemic diseases involving the skin is outstanding. Part I briefly describes dermatologic procedures varying from surgical methods to hypnotherapy. The neophyte would be well advised to consult more extensively written texts before attempting any of them.

Part II, Therapeutic Management, comprises the bulk of this book. Disease entities, including many synonyms and eponyms, are arranged alphabetically. Discussion is usually under the perferred current terminology. It was a bit disconcerting to find no heading for neurodermatitis listed in the index or text as this term is used frequently by the non-dermatologist. As in other textbooks, there is an unavoidable time lag between authorship and publication. Some of the references are already dated but Dr. Maddin closes the gap with pertinent editorial notes. Part II is replete with the most beautiful close-up color plates I have ever seen in a medical publication.

Part III is the sole work of Dr. Terence H. Brown, Associate Professor of Pharmacology at the University of British Columbia. It is literally a master-piece. Every drug likely to be used for cutaneous diseases is included. There are even descriptions of some agents still under clinical investigation. The chemistry, structural formula, mode of action, indications and side effects of each, where appropriate, are defined. This section would be especially useful to the dermatology trainee and the non-dermatologist.

This book should be a welcome addition to the libraries of those interested in cutaneous medicine. The dermatologist would find some portions too brief due to a lack of detailed descriptions which only the specialist can appreciate. In contrast, information normally found only in recent journals and the pharmacology section are invaluable.

WILLIAM G. BALLINGER, M.D.

**Urological Surgery**, 4th ed. AUSTIN INGRAM DODSON, JR., M. D. Price $32.50. Pp. 617, with 694 illustrations. St. Louis: Mosby, 1970.

This long-awaited book is a revision of one of the classical urological texts. Considerable updating was necessary since the last edition was published fourteen years ago and this has been ably accomplished by Dr. Dodson, the son of the original author, and a group of distinguished contributors.

The basic format remains the same as previous editions. The subject matter is divided by an anatomic and pathological classification, and although basically considered a surgical text, the material is not limited to surgical techniques. There is ample description of pathological processes as well as indications for surgery, considerations of pre and post operative care and complications.

Noteworthy new and rewritten chapters include among other subjects, surgery of renal hypertension, treatment of urogenital injuries, ureterovesical anastomosis, surgery of bladder carcinoma, use of the bowel in urological surgery, urethroplasty for strictures, treatment of renal tuberculosis, radiation therapy and chemotherapy of bladder carcinoma.

The presentation and organization of material is quite good, making the book easily readable. The illustrations are adequate and in many cases give step-by-step details.

This book is a must for urology residents and practicing urologists. It should also prove useful as a reference book for students, gynecologists and general surgeons.

IRWIN SHUMAN, M. D.

# OBITUARIES

## Ivy A. Pelzman, M.D.
## (1890—1970)

Dr. Ivy A. Pelzman a retired Washington urologist died December 25, 1970, He lived at 4201 Cathedral Avenue, N. W.

A native of Washington, D. C., he was a graduate of Central High School. He received his medical degree from the Georgetown University School of Medicine in 1913. He served his internships at Fordham University and Mt. Sinai Hospital in New York City from 1913—1916. He also served on the Dispensary Staff at Freedman's Hospital in 1916.

As an Army physician from 1919—1922, he served in the Philippines and in China. In 1941 he returned to the Army as a major and served in the Southwest Pacific. He retired from the Army as a colonel. Dr. Pelzman was found of Post 58 of the Jewish War Veterans.

After retiring from the Army, Dr. Pelzman served as a volunteer with a Red Cross clinic in New York. He moved back to Washington several years ago.

Dr. Pelzman was a member of the American Medical Association as well as the Medical Society of the District of Columbia and the Jacobi Medical Society.

Widowed twice, he was married to the former Lillian Richardson and the former Katherine Jacobs. He is survived by a sister, Rose Pearlman of Washington, D. C.

### John C. Sherbourne, M.D.
### (1918–1970)

Dr. John C. Sherburne, a Falls Church pediatrician, died November 2, 1970. He lived at 9611 Verveille Drive, Vienna, Virginia.

Born in Mystic, Connecticut, on February 25, 1918, Dr. Sherburne received his A. B. degree from Miami University, Oxford, Ohio in 1941, and his medical degree from the George Washington University in 1944. He interned at St. Elizabeth's Hospital from 1944–1945 and was a resident at Children's Hospital from 1945–1946.

He served in the United States Army from 1943–1944.

Dr. Sherburne is survived by his wife, JoAnn, a daughter Sandra and a son Jay of the home address.

### William C. Manion, M.D.
### (1916–1970)

Dr. William Cecil Manion, an authority on cardiovascular diseases, died November 5, 1970 at his Kensington home, 4213 Glenrose Street.

A native of Bethel, Connecticut, he graduated from Catholic University in 1939 and received his medical degree from Georgetown University in 1943. He interned at Garfield Hospital, Washington, D. C. in 1943–1944 and was a resident at Gallinger Municipal Hospital from 1946–1948.

He served with the U. S. Marine Corps. as a medical officer in the Pacific theater during World War II.

Following the war, he became pathologist at Prince George's General Hospital in Cheverly, Maryland.

Since 1952 Dr. Manion had been on the staff of the Armed Forces Institute of Pathology where he formed a cardiovascular pathology department. In 1963 he became Clinical Associate Professor of Medicine at Georgetown University Medical School.

Dr. Manion was chairman of the Pan American Committee of the American Society of Clinical Pathologists. He was awarded the Veterans Administration's outstanding achievement award, the Department of the Army professional civilian award, Catholic University's outstanding alumnus award and the American Medical Association's Hekotoen Award.

He is survived by his wife, the former Billie Pappas and four sons: William C. Jr., James S., Eugene T., and Brian M., all of the home address.

## NATIONAL & REGIONAL MEETINGS

March 6–11: American Academy of Orthopedic Surgeons. San Francisco. Address: Dr. Charles V. Heck, Director, 430 N. Michigan Avenue, Chicago, 60606.

March 29–April 3: American College of Radiology. St. Louis. Address: Wm. C. Stronach, LLB, 20 N. Wacker Drive, Chicago 60606.

April 19–22: Southeastern Surgical Congress. Miami Beach, Florida. Address: Dr. A. H. Letton, Secretary-Director, 340 Boulevard, N. E., Atlanta, 30312.

April 26–27: A. M. A. Congress on Environmental Health–Solid Waste Management. New York. Address: A. M. A. Department of Environmental Health, 535 N. Dearborn Street, Chicago, 60610.

April 26–May 1: American Academy of Neurology. New York. Address: Mr. Stanley A. Nelson, Executive Secretary, 4005 W. 65th Street, Minneapolis 55435.

**April 29–May 3: American Psychoanalytic Association, Annual Meeting. Shoreham Hotel, Washington, D. C. Address: Mrs. Helen Fischer, Executive-Secretary, 1 E. 57th Street, New York 10022.**

**April 30–May 2: American Academy of Psychoanalysis. Mayflower Hotel, Washington, D. C. Address: Miss Jean Baker Miller, Secretary, 510 E. 86th Street, New York 10028.**

**May 1: American College of Psychiatrists. Shoreham Hotel, Washington, D. C. Address: Dr. Peter A. Martin, Secretary-General, 857 Fisher Building, Detroit, 48202.**

May 3–7: American College of Obstetricians and Gynecologists. San Francisco. Address: Dr. Michael Newton, Director, 79 W. Monroe Street, Chicago, 60603.

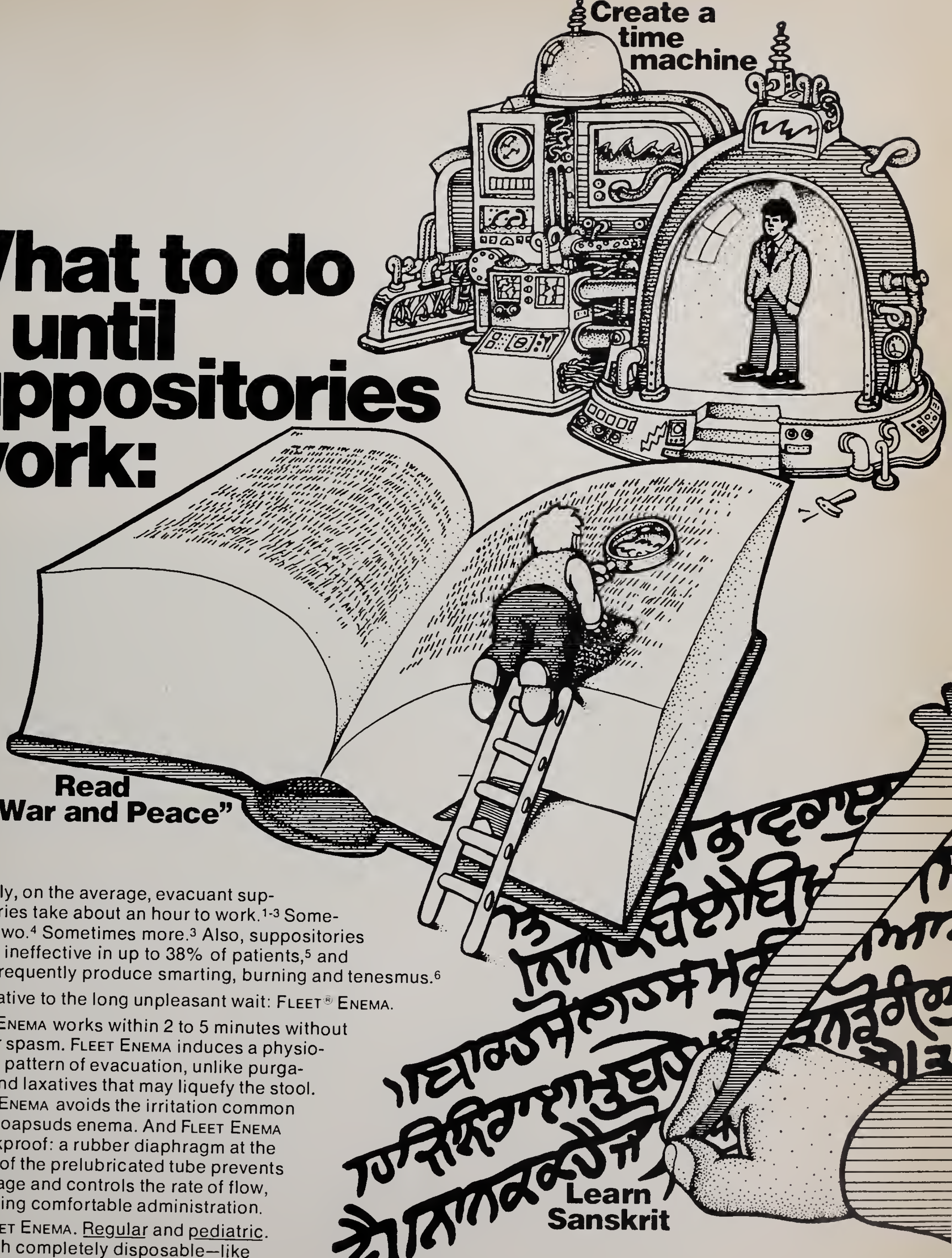
**May 23–27: American Association of Plastic Surgeons. Williamsburg, Va. Address: Mr. Dallas F. Whaley, Director, 29 E. Madison Street, Chicago, 60602.**

May 24–27: American Ophthalmological Society. Hot Springs, Va. Address: Dr. Samuel D. McPherson, Jr., 1110 W. Main Street, Durham, North Carolina 27701.

**June 14–16: American Neurological Association. Shoreham Hotel, Washington, D. C. Address: Dr. Samuel A. Trufant, Secretary-Treasurer, Cincinnati General Hospital, Cincinnati 45229.**

June 20–24: American Medical Association. Atlantic City. Address: Dr. Ernest B. Howard, 535 N. Dearborn Street, Chicago 60610.

# What to do until suppositories work:



Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

Fleet
pharmaceuticals

C. B. FLEET CO., INC.
Lynchburg, Va. 24505

**Warning:** Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present. **Caution:** Do not administer to children under two years of age unless directed by a physician.

**References:** 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964

Efudex®
(fluorouracil)
cream/solution

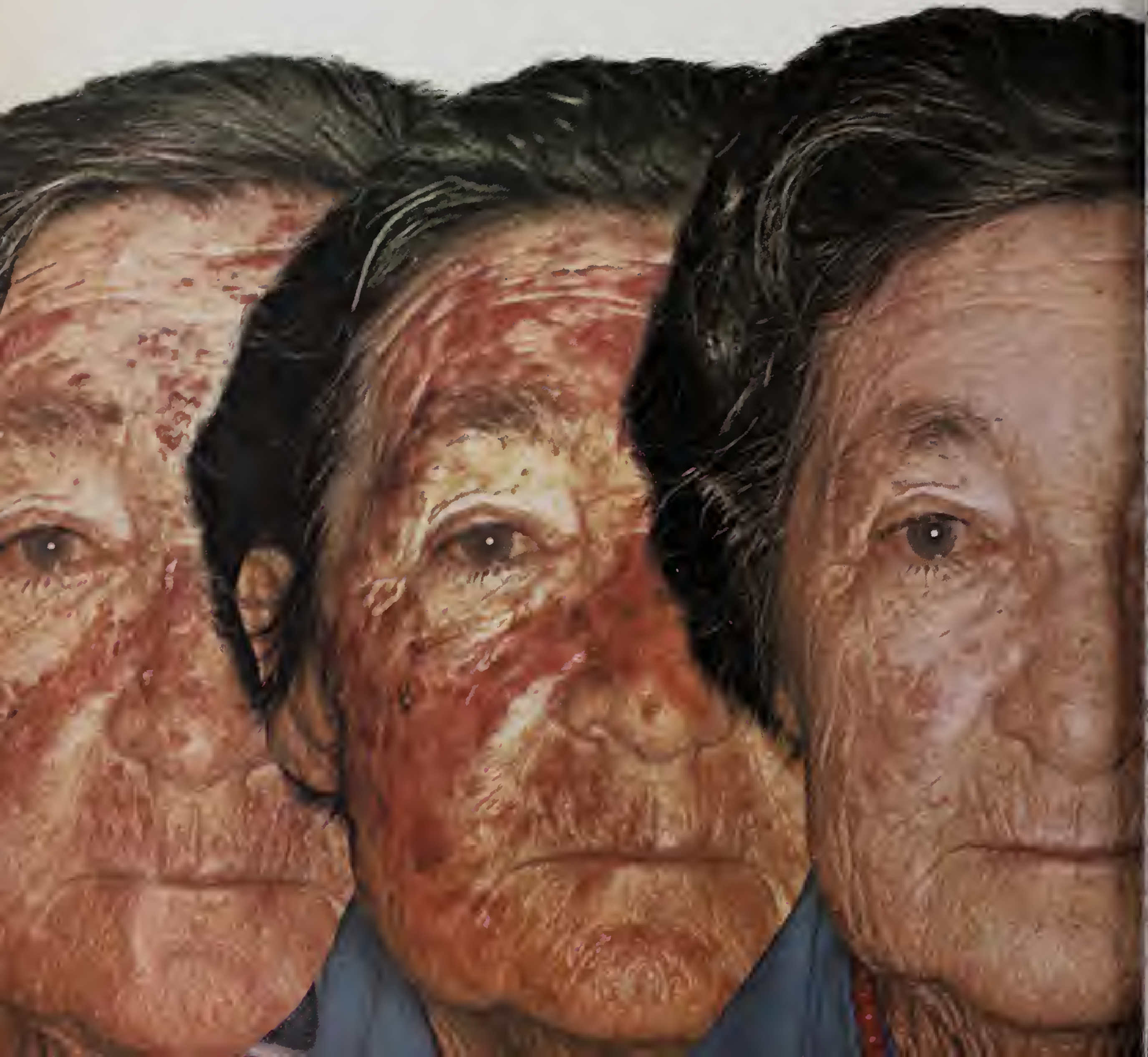
In the treatment of solar/actinic keratoses –

An alternative to cold, fire and steel

**2/23/68**
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

**3/26/68**
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

**6/11/68**
Ten weeks after discontinuance of therapy. All areas have healed completel
Residual mild erythema remains in som
areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.



ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

## n alternative conventional therapy

Efudex (fluorouracil) offers the physician a cal alternative to cryosurgery, electrodesiccation cold-knife surgery in the treatment of solar/actinic toses. It is effective, comparatively inexpensive and cially well suited for treatment of these multiple ns. Important, too, is the highly desirable cosmetic lt. Clinical experience demonstrates that treatment Efudex results in an extremely low incidence of ing.*

## ghly effective

In clinical trials, depending on the dosage form trength used, complete involution occurred in 88 per cent of lesions following treatment. The f recurrence was low, ranging from 1.7 to 5.6 per up to a year after completion of therapy. When esions appeared, repeated courses of Efudex py proved effective.*

## edictable rapeutic response

Two to four weeks constitutes a typical course idex therapy. The response is usually characteris- d predictable. After three or four days of treat- erythema begins to appear in the area of keratoses. s followed by an intense inflammatory response, g and occasionally moderate tenderness or pain. eight of the inflammatory reaction generally occurs eeks after the start of therapy, and then begins side as treatment is stopped. Within two weeks of tinuing medication, the inflammation is usually A mild erythema may remain for two or three s before gradually receding. Since this response redictable, lesions which do not respond be biopsied.

## strengths—two sage forms

Efudex is available as a 2% or 5% solution or cream. It is applied twice daily by the patient nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two im- t considerations: First, please consult the com- rescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

25 Gm
EFUDEX®
TOPICAL
CREAM 5%
Item 72630
NDC-4-1506-03
fluorouracil ROCHE

new
# Efudex®
(fluorouracil)
cream/solution

---

n file, Hoffmann - La Roche Inc., Nutley, New Jersey.

# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

*Classified advertisements of a professional nature are free to members.*

## REAL ESTATE

FOR SALE: Choice building lot for physician or dentist office-home combination. Lot is level, sidewalk and all utilities are in. Ideal location on corner of Old Georgetown and Bells Mill Roads, opposite Wildwood Shopping Center. Excellent financing available. Telephone (202) 299-3101.

FOR SALE: Physician's home-office combination on 16th Street, N. W. with Doctor's equipment and supplies and possibly practice. Extra lot on 16th Street, N. W. $57,500. Telephone (202) 783-8010, Mr. Kenneth Bennett.

FOR SALE: Home-office combination in Silver Spring on main boulevard. Four bedroom rambler. 3 baths, 3 treatment rooms with pumbing, waiting room, reception room, consultation room, laboratory, utility area, X-ray and dark room, storage areas. Handsome brick walkway on street level to office entrance. Telephone Mr. Jerry Bauman, (202) 593-6500 (office) or 593-8060 (home).

## OFFICE SPACE AVAILABLE

FOR RENT: Physician's offices just off Massachusetts Avenue, N. W., in modern a/c apt. building. First floor suite has paneled, carpeted physician's office, receptionist's office, waiting room, 3 examining rooms, 2 powder rooms, Formica counters and built-ins throughout. Reserved parking space. All utilities included. Reasonable rent. Telephone (202) 234-1172.

FOR RENT: 1726 Eye Street, N. W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298-6936.

FOR RENT: One choice medical office available. Approximately 500 sq. ft. Many windows. Private Powder room. All utilities, char service, central individually controlled a/c included. Contact owner/manager, 1800 Eye Street, Medical Building. Telephone (202) Re 7-1299.

FOR RENT: Psychiatrist to share waiting room with 2 other psychiatrists. Location on MacArthur Blvd. Convenient to Downtown, Virginia, and Maryland. Contact Dr. Michael J. Durr, Telephone (202) 966-6665 or 829-1140.

## EQUIPMENT FOR SALE

HAMILTON EXAMINING TABLE and matching walnut chair, instrument cabinet, and dressing stand, 50" office desk and chair. Surgical instruments. Telephone (202) 234-6646 or 265-0065.

## SERVICES

INCOME TAX SERVICE: Will you pay only what is required by law? May I assist you in maximizing your tax benefits? I have a MBA degree and five years experience in performing tax services for my clients. Please call Dean A. Peterson (202) 836-4031.

"Cappy"
INTRODUCES THE WASHINGTON AREA SPECIALISTS in collections for Professionals

I'M
"Cappy"
an Old Fashioned girl with MODERN ideas about bill collecting . . .

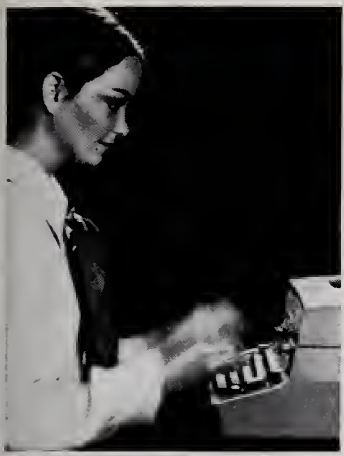
Unless We Collect, There Is No Charge

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

'PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.



# Dear Sir:

# Even the fastest typist in your office will slow down your letters if she doesn't use the ZIP CODES

| List below the addresses (no names necessary) of the people whose Zip Codes you need: | Post Office will fill in Zip Codes here |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

our Name______________________________

our Address____________________________

ity____________________________________

tate________________________ Zip__________

Place in stamped envelope and mail to: Local Post Office.
No return envelope necessary.

Money for shorthand.

Money for electric typewriters.

Money for an efficient mail room.

None of it makes much sense if your letter is going to spend unnecessary hours at the Post Office.

And that's what may happen if your secretary doesn't have the Zip Codes she needs.

Which is why we printed the coupon at left.

Tell your girl to fill it out and mail it in. We'll supply the Zip Codes she's missing. Free.

Then, when you rush off a letter and she rushes it out, we can keep right on rushing it.

All the way to its destination.

*Mail moves the country –*
*ZIP CODE moves the mail!*

advertising contributed
for the public good

ADVERTISING COUNCIL®

**Complete professional liability (Malpractice)* and Personal Insurance for the Doctor.**

Employees Workmen's Compensation
Bonds on Employees
Equipment Floater
Fire Insurance Contents
Business Expense Disability
Non-Cancellable Disability Income
Auto and Home Insurance

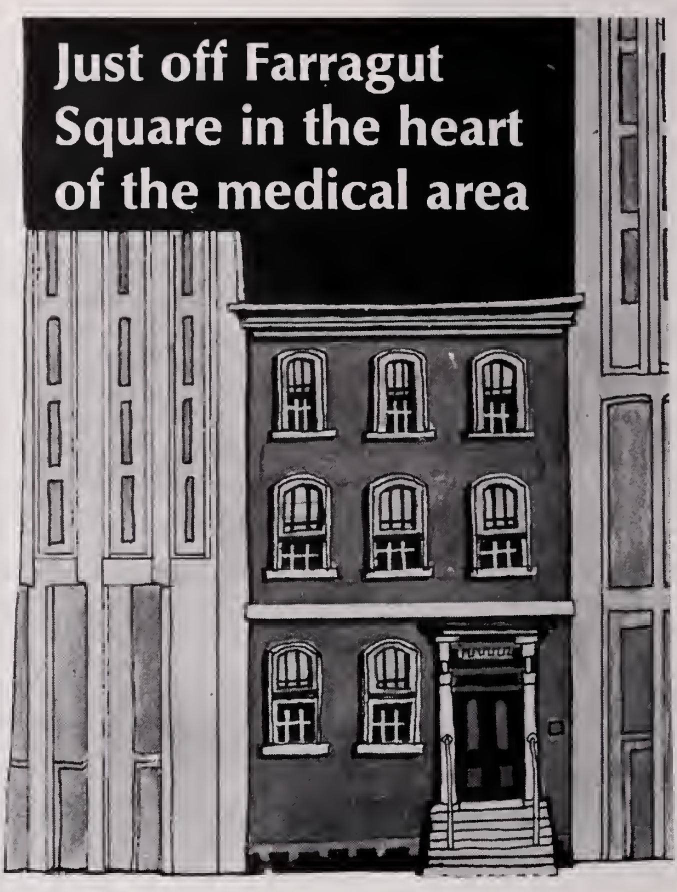
**As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*


Just off Farragut Square in the heart of the medical area

Ulcer Re-lief!

**Dicarbosil®**
ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Surgical Supplies and Equipment

*Complete Fitting Service for Ladies and Men*

**KLOMAN SURGICAL SUPPLY CO.**
**1028 19th Street, N.W.**
**Washington, D. C. 20036**

***Telephone:* 223-3444**

**NURSES REGISTRY**

LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**

WHEN TRAUMA
RESULTS IN PAIN...

This photograph in no way implies
an endorsement of Norgesic by Jerry Quarry

rgesic . . . provides effective analgesia and relief of associated muscle spasm

**Contraindications:** Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.

Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).

**Warnings:** USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.

**Precautions:** It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.

**Adverse Reactions:** Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established.

**Dosage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

**Riker Laboratories, Inc.**
NORTHRIDGE, CALIFORNIA 91324

A SUBSIDIARY OF 3M COMPANY

**NORGESIC®**

(orphenadrine citrate, 25 mg., aspirin, 225 mg., phenacetin, 160 mg., caffeine, 30 mg.)

**the versatile analgesic**

If you don't do it, it won't get done.

GIVE THE UNITED WAY

advertising contributed for the public good

ADVERTISING COUNCIL®

**in cardiac edema**

Trademark

**Dyazide®**

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

**gets the water out**

**spares the potassium**

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

**Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

**Contraindications:** Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

**Warnings:** **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

**Precautions:** Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

**Supplied:** Bottles of 100 capsules.

SK&F

SK&F Co., Carolina, P.R. 00630
a subsidiary of Smith Kline & French Laboratories

# INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

| | Page |
|---|---|
| **Bank** | |
| RIGGS NATIONAL BANK | 4 |
| **Business Counseling** | |
| DATA-MEDICS | T-153 |
| **Collection Agencies** | |
| CAPITAL CREDIT CORPORATION | 14 |
| CREDIT BUREAU | 8 |
| **Dietetic Products** | |
| CAMPBELL SOUP COMPANY | T-113 |
| **Equipment and Supplies** | |
| KLOMAN SURGICAL SUPPLY COMPANY | 16 |
| **Insurance** | |
| McDERMOTT INSURANCE, INC. | 16 |
| MUTUAL OF OMAHA | 3-C |
| RUSSELL MARSH & KENNEDY | 8 |
| **Investment Planning** | |
| EUGENE F. ROESSER | 20 |
| **Nurse Registries** | |
| ASSOCIATION OF UNDERGRADUATE AND PRACTICAL NURSES REGISTRY | 16 |
| CAPITAL NURSE REGISTRY | T-138 |
| DISTRICT OF COLUMBIA MANPOWER ADMINISTRATION | T-138 |

T-text

| | Page |
|---|---|
| **Pharmaceuticals** | |
| ARCH LABORATORIES | 16 |
| BECTON-DICKINSON & COMPANY | T-123, 124 |
| BURROUGHS-WELLCOME & COMPANY | T-151 |
| BURTON-PARSON COMPANY | T-148 |
| C. B. FLEET COMPANY | 11 |
| GEIGY PHARMACEUTICALS | 6 |
| ELI LILLY & COMPANY | 10 |
| MERCK, SHARP, & DOHME | T-136–137 |
| NATIONAL DRUG COMPANY | T-117, 118, 21, 22 |
| WM. P. POYTHRESS & COMPANY | T-116 |
| RIKER LABORATORIES | 17 |
| A. H. ROBINS | T-133 |
| ROCHE LABORATORIES | 2-C-3, 11, 13, 15, 4-C |
| G. D. SEARLE & COMPANY | T-114–115 |
| SMITH KLINE & FRENCH LABORATORIES | 19 |
| E. R. SQUIBB & SONS, INC. | T-150 |
| THE UPJOHN COMPANY | T-149 |
| WARNER-CHILCOTT | T-138, 139 |
| **Pharmacies** | |
| MAXWELL & TENNYSON | 9 |
| PEOPLES DRUG STORES | T-132, 133 |
| **Sanitariums** | |
| KALORAMA CONVALESCENT HOME | T-153 |
| **Vacation & Recreation** | |
| BOAR'S HEAD INN | T-145 |

KEOGH RETIREMENT PLANS

Funded with Your Choice from a Wide Selection of Mutual Funds

Continuing Annual Service, Including Preparation of Tax Form 2950 SE

EUGENE F. ROESSER, C. L. U.

*Financial Services for Physicians*

1130 Seventeenth Street, N.W.
Washington, D. C. 20036

District 7–1114

# The girth control pill

# epanil® Ten-tab®

(continuous release form)

**diethylpropion hydrochloride, N.F.)**

## works on the appetite
## ot on the 'nerves'

/hen girth gets out of control, TEPANIL can provide sound
pport for the weight control program you recommend.
EPANIL reduces the appetite—patients enjoy food but eat
ss. Weight loss is significant—gradual—yet there is a rela-
ely low incidence of CNS stimulation.

**ntroindications:** Concurrently with MAO inhibitors, in patients hypersensitive to
drug; in emotionally unstable patients susceptible to drug abuse.
**rning:** Although generally safer than the amphetamines, use with great caution in
ients with severe hypertension or severe cardiovascular disease. Do not use dur-
first trimester of pregnancy unless potential benefits outweigh potential risks.
**verse Reactions:** Rarely severe enough to require discontinuation of therapy, un-
asant symptoms with diethylpropion hydrochloride have been reported to occur
elatively low incidence. As is characteristic of sympathomimetic agents, it may
osionally cause CNS *effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-103 / 2/71 / U.S. PATENT NO. 3,001,910

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

# Painful night leg cramps...

## unwelcome bedfellow for any patient–including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

**Prescribing Information—Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

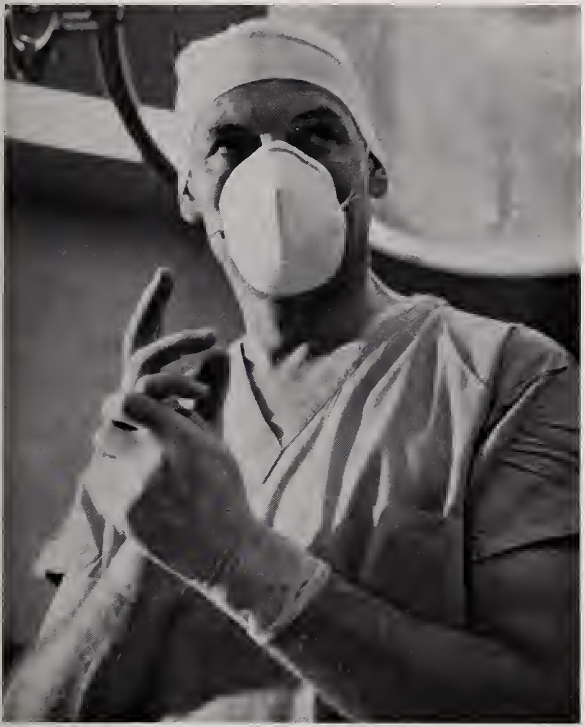
**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**

**Quinamm**™ Specific therapy for night leg cramps

(quinine sulfate 260 mg., aminophylline 195 mg.)

# Make Sure You Have Cash To Live On When You're Disabled!

Even doctors get sick and hurt! When your turn comes and you can't continue your practice, will you still be able to provide for yourself and your family—pay for food, clothing, your home, the everyday living expenses, plus extra medical bills?



You can have this financial security with the Disability Income Protection Plan available to members of the Medical Society of the District of Columbia.

PAYS UP TO $225.00 A WEEK
when you're sick or hurt
and can't practice!

*Check these other important features of this plan:*

- Benefits are TAX-FREE, for you to use as you see fit.
- Confinement is never required during disability.
- Benefits are payable regardless of other coverage.
- There is no automatic age termination.
- Your policy is guaranteed renewable while the program remains in force regardless of benefits paid to you or any future changes in health.
- Premiums are low, due to the mass purchasing power of your Society.
- There are few exceptions. Your policy does not cover: suicide or attempted suicide; loss during a declared or undeclared war or while a member of an armed service; loss due to noncommercial flying; costs of childbirth, pregnancy or any complication.

Fill out the coupon below and mail it today! You'll receive complete information on this outstanding Disability Income Protection Plan available to you as a member of the Medical Society of the District of Columbia. Don't delay!

JOSEPH E. JONES, Administrator
1666 Connecticut Avenue, N.W.
Washington, D.C. 20009 Phone: (202) 483-3100

Please rush to me complete information on the Disability Income Protection Plan available to me as a member of the Medical Society of the District of Columbia!

Name______________________________

Address______________________________

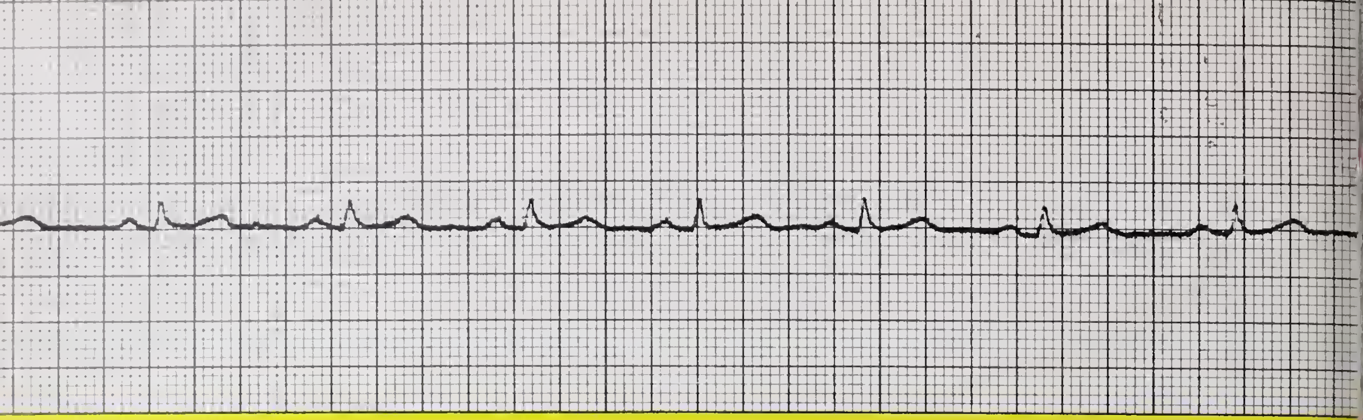
City__________ State________ ZIP Code_____

Underwritten by

Mutual of Omaha®
The Company that pays

Life Insurance Affiliate: United of Omaha

MUTUAL OF OMAHA INSURANCE COMPANY
HOME OFFICE: OMAHA, NEBRASKA



When disease is ruled out
and psychic tension is implicated
Valium® (diazepam)
helps relax the patient
and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

*Volume 40 · Number 3 · March 1971*

# MEDICAL ANNALS
## of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

**Lipoproteins—Clinical Application**
ROBERT A. DIETRICH, M.D.

**Cancer of the Prostate Simulating Rectal Cancer**
CLARE A. STEIN, M.D. AND WILLIAM P. HERBST, III, M.D.

**Microscopic Laryngoscopy and Laryngeal Surgery**
LOUIS B. BALLA, M.D. AND PAUL ELSBERG, M.D.

**Carbon Monoxide in Health and Politics**
HAROLD M. SILVER, M.D.

**Cancer Program in a Private Hospital**
KARL C. JONAS, M.D.

**Atrioventricular Conduction Response Following Digoxin**
JAMES R. SNYDER, M.D., LYNNE A. DAVIDSON, AND JANVIER C. YOUNG

**Clinical Significance of the Atrial T Wave**
JUAN B. CALATAYED, M.D. AND HAROLD M. SILVER, M.D.

*(Complete Index on Page 5)*

FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
2 APR 1971

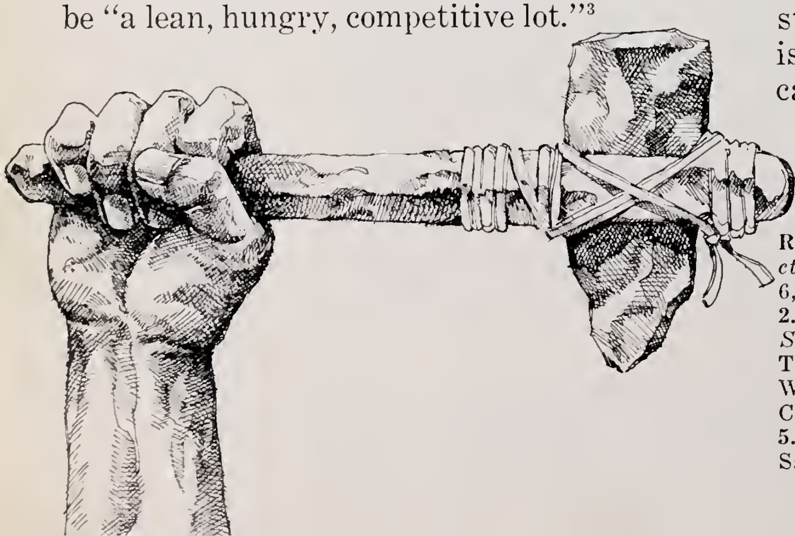
**The Coronary Care Unit at Doctors Hospital. Miss Crystal Wolf, R.N. with the Cardiac Monitoring Unit.**

# IF MORE MEN CRIE

**At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]**

**Hypersecretion—an atavistic response.** Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

**By chance? A lean, hungry lot.** Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



**Big boys don't cry.** If more men crie
maybe fewer would wind up with duoden
ulcers. But men will be men—the sum total o

their genes and what the
are taught. Schottstaed
observes that when
mother admonishes he
son who has hurt himsel
that big boys don't cry, sh
is teaching hi
stoicism.[4] Crying is th
negation of everythin
society thinks of as manl
A boy starts defending hi
manhood at an early ag

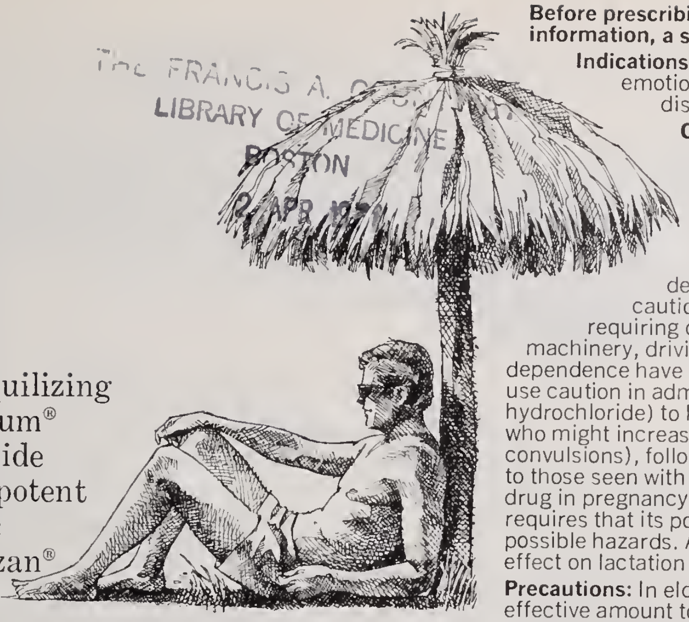
**Take away stres**
**you can take away symptom**

There is no question that stress plays
role in the etiology of duodenal ulce
Alvarez[5] observes that many a man with a
ulcer loses his symptoms the day he shuts u
the office and starts out on a vacation. Th
problem is, the type of man likely to have a
ulcer is the type least likely to take lon
vacations or take it easy at work.

**The rest cure vs. the two-way action o**
**Librax.®** For most patients, the rest cure
as unrealistic as it is desirable. Still, th
stress factor must be dealt with. And he
is where the dual action of adjunctive Libra
can help. Librax is the only drug that con

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M.
*et al.* (eds.): *Harrison's Principles of Internal Medicine,*
6, New York, McGraw-Hill Book Company, 1970, p. 14
2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wol*
*Stress and Disease,* ed. 2, Springfield, Ill., Charles
Thomas, 1968, pp. 68-69. 3. *Ibid.,* p. 257. 4. Schottstae
W. W.: *Psychophysiologic Approach in Medical Practi*
Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 1
5. Alvarez, W. C.: *The Neuroses,* Philadelphia, Pa., W.
Saunders Company, 1951, p. 384.

The FRANCIS A. [illegible]
LIBRARY OF MEDICINE
BOSTON
2 APR 19[illegible]



nes the tranquilizing
tion of Librium®
chlordiazepoxide
Cl) with the potent
nticholinergic
tion of Quarzan®
lidinium Br).

**Protects man from his own hungry per-**
**nality.** The action of Librium reduces
xiety—helps protect the vulnerable patient
om the psychological overreaction to stress
at clutches his stomach. At the same time,
e action of Quarzan helps quiet the hyper-
tive gut, decreasing hypermotility and
persecretion.

**An inner healing environment with 1**
**2 capsules, 3 or 4 times daily.** Of course,
ere's more to the treatment of duodenal
cer than a prescription for Librax. The pa-
int—with your guidance—will have to ad-
st to a different pattern of living if treat-
ent is to succeed. During this adjustment
riod, 1 or 2 capsules of Librax 3 or 4 times
ily can help establish a desirable environ-
ent for healing.

Librax: It can't change man's nature.
t it can usually make it easier for men to
pe with the discomfort of stress—both
ychic and gastric—that can precipitate
d exacerbate duodenal ulcer.
brax: Rx #60 1 cap. *a.c.* and 2 *h.s.*

**Before prescribing, please consult complete product information, a summary of which follows:**

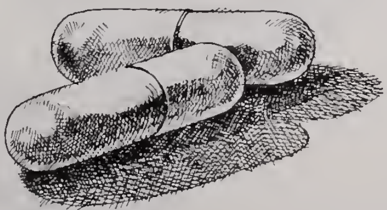
**Indications:** Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

**Contraindications:** Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

**Precautions:** In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

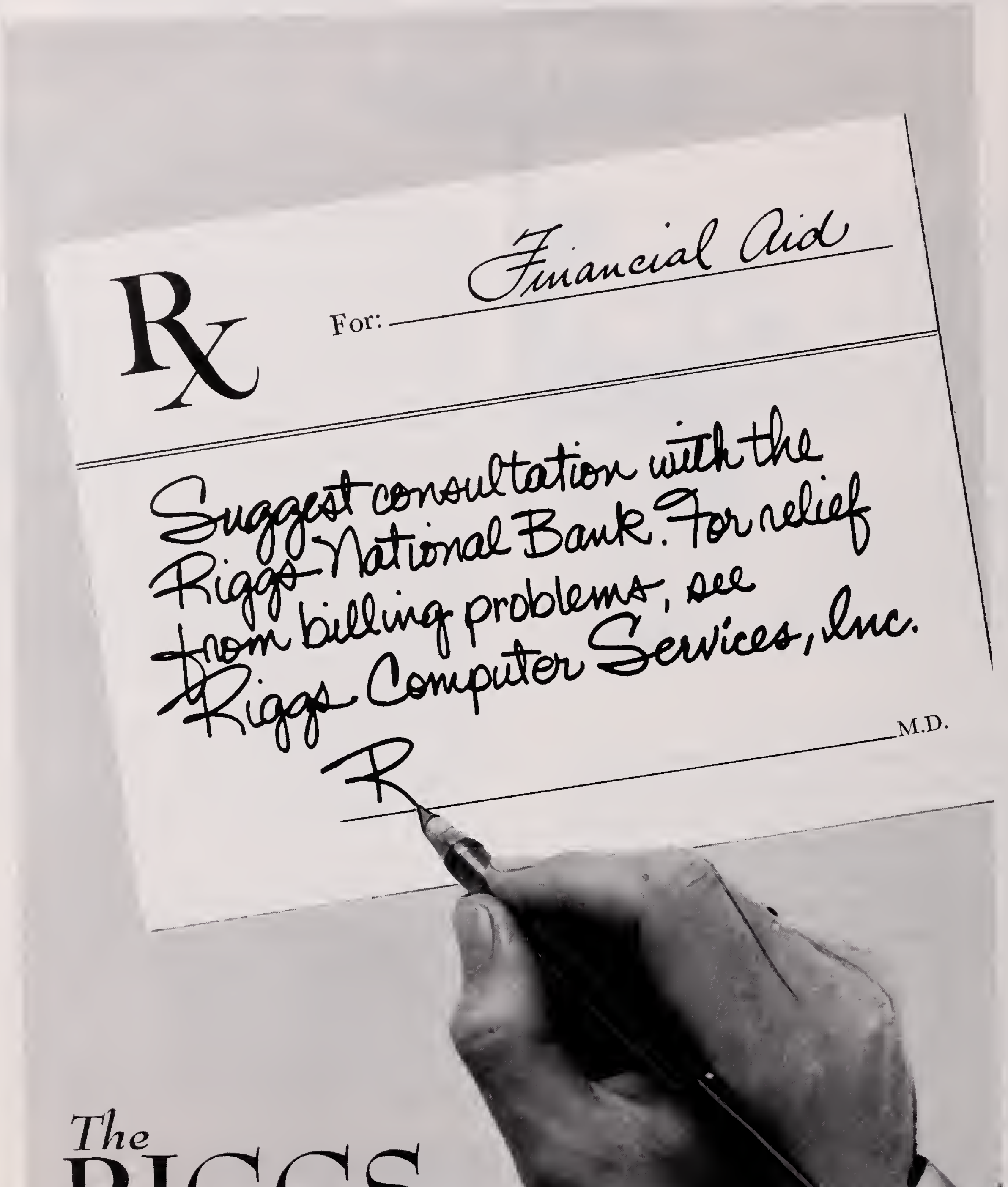


**in the treatment of**
**duodenal ulcer**
**adjunctive**
**Librax®**

Each capsule contains 5 mg chlordiazepoxide HCl
and 2.5 mg clidinium Br.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



Rx For: Financial Aid

Suggest consultation with the Riggs National Bank. For relief from billing problems, see Riggs Computer Services, Inc.

R M.D.

The RIGGS NATIONAL BANK of WASHINGTON, D.C. • FOUNDED 1836

RIGGS COMPUTER SERVICES, INC.

Member Federal Deposit Insurance Corporation • Member Federal Reserve System • Phone 783-5600

**VOLUME 40 • MARCH 1971**

**EDITOR**

Wallace M. Yater, M.D.

**ASSISTANT TO THE EDITOR**

Judith E. Perruso

**MANAGING EDITOR**

Francisco P. Ferraraccio

**EDITORIAL BOARD**

Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**

Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, M.D. Associate Chief of Staff for Research and Education, Veterans Administration Hospital.
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
Howard Katzman, M.D., First Vice President*
James E. Boland, M.D., Second Vice President*
Mr. Thomas Sadler, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Frank S. Bacon, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

**MEDICAL ANNALS**
of the
**DISTRICT OF COLUMBIA**

2007 Eye Street, N.W. Washington, D.C. 20006

**The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to Dr. Wallace M. Yater, Editor, Medical Annals of the District of Columbia, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. Medical Annals will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the Annals is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the Medical Annals of the District of Columbia must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the Annals office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

You know diuretics medically.

Short-acting diuretics may create abrupt, inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

Hygroton® chlorthalidone USP

Makes water, not waves.

But have you met them socially?
LADIES

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-9

# MEDICAL ANNALS
## of the District of Columbia

## Contents for March

DOCTOR'S HOSPITAL NUMBER

### SCIENTIFIC ARTICLES

Lopoproteins—Clinical Application. *Robert A. Dietrich, M.D.*, Washington, D. C. 157

Cancer of the Prostate Simulating Cancer of the Rectum: The Digital Dilemma. Report of 3 Cases. *Clare A. Stein, M.D.*, and *William P. Herbst, III, M.D.*, Washington, D. C. 162

Microscopic Laryngoscopy and Laryngeal Surgery. *Louis B. Balla, M.D.*, and *Paul Elsberg, M.D.*, Washington, D. C. 165

Carbon Monoxide in Health and Politics. *Harold M. Silver, M.D.*, Washington, D. C. 169

Establishment and Function of a Clinical Cancer Program in a Private Hospital. *Karl C. Jonas, M.D.*, Washington, D. C. 172

Quantitation of the Atrioventricular Conduction Response Following Dixogin in Normal Subjects. *James R. Snyder, M.D.*, *Lynne A. Davidson*, and *Janvier C. Young*, Washington, D. C. 175

The Clinical Significance of the Atrial T-Wave. *Juan B. Calatayud, M.D.*, and *Harold M. Silver, M.D.*, Washington, D. C. 178

### EDITORIALS

Higher Education and the Nation's Health 213

### SPECIAL SECTION

History of the Medical Society of the District of Columbia. Chapter IX. *Theodore Wiprud* 191

### MISCELLANY

President's Page: "Local Medical Legislation and Where We Stand" 184

Patient Referrals Needed 216

Summary of Executive Board Actions 217

Meetings 218

D. C. Health Notes 219

DOCPAC Briefs 219

General News 220

1971 Kober Lecture 221

New Members 221

National and Regional Meetings 221

*Medical Annals Staff and Officers of the Medical Society* Adv. 3

*Classified Advertisements* Adv. 11

*Index of Advertisers* Adv. 13

---

Copyright ©, 1971 by The Medical Society of the District of Columbia. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

R M K

*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659–8040
Monday–Friday
8:30 a.m.–4:00 p.m.

**NURSES REGISTRY**

LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**

**KEOGH RETIREMENT PLANS**

Funded with Your Choice from a Wide Selection of Mutual Funds

Continuing Annual Service, Including Preparation of Tax Form 2950 SE

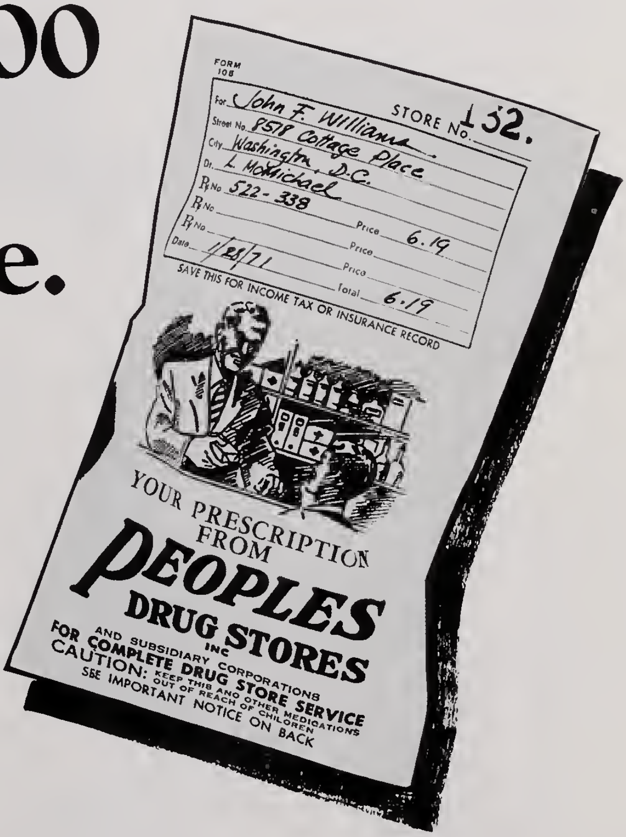
**EUGENE F. ROESSER, C. L. U.**

*Financial Services for Physicians*

1130 Seventeenth Street, N.W.
Washington, D. C. 20036

District 7–1114

The bag that has earned more than 125,000,000 votes of confidence.



FORM 108

For John F. Williams STORE No. 132.
Street No. 8518 Cottage Place
City Washington, D.C.
Dr. L. McMichael
℞ No 522-338
℞ No ____ Price 6.19
℞ No ____ Price ____
Date 1/25/71 Price ____
Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD

YOUR PRESCRIPTION FROM
PEOPLES DRUG STORES INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®
PRESCRIPTION DRUG STORES

WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.

ILOSONE
LIQUID
250
Lilly

**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
**Ilosone® Liquid 250**
Erythromycin Estolate
(equivalent to 250 mg of base per 5-ml teaspoonful)

*Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206*
Lilly
100204

MEDICAL ANNALS
of the District of Columbia

March 1971
VOLUME 40 • NUMBER 3

**Doctors Hospital Number**

This is the eleventh in a sixth series of the MEDICAL ANNALS, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan area. For the DOCTORS HOSPITAL NUMBER the Editorial Board is indebted to Dr. Richard L. Bohannon, Director of Medical Education, Doctors Hospital, who secured the papers which appear in this issue.

# Lipoproteins—Clinical Application

ROBERT A. DIETRICH, M.D.*

VIRTUALLY ALL OF THE PLASMA lipids exist not as separate chemical entities but in the form of complexes in combination with specific proteins. These are called lipoproteins. They represent the mechanism by which lipids are kept in aqueous solution in the plasma and can be transferred across the membranous boundaries of cells. They are tremendous molecules containing, along with protein, phospholipid, cholesterol esters, cholesterol, triglycerides, and even a small amount of free fatty acids. Though there is enough stability in these compounds to allow precipitation with reproducible composition, the forces of chemical combination are loose enough to permit exchange of some of the lipid constituents with others in the plasma. How such large molecules (some with M.W. of several million) can be soluble in water is difficult to explain, but there is evidence that the hyprophilic portions of the molecule, such as protein and phospholipids, are on the outside in contact with water, while the hydrophobic portions such as the triglycerides, cholesterol and cholesterol esters are in the interior, sheltered from contact with water molecules.

The plasma lipoproteins, stable or unstable, are a heterogenous group of compounds that can be separated into smaller groups by electrophoresis or ultracentrifugation. The lipoprotein complexes have low densities, but all except the chylomicrons are slightly heavier than water. The lipoproteins show different rates of flotation when centrifuged in salt solution, and the migration can be measured and recorded photographically. Lipoproteins are classified as having low density if they show flotation in salt solution density of 1.063. Those with densities between 1.063 and 1.21 are called high-density lipoproteins (HDL). The low-density fraction (LDF) is further subdivided on the basis of their flotation rates in Svedberg flotation units (Sf). The subgroup $S_f$ 0–12 is the heaviest of the low-density fraction and is found in the plasma of all persons. The broader low-density group ($S_f$ 20–400) represent basic low-density lipoproteins to which variable amounts of triglycerides have become attached.

Included in the spectrum of lipoproteins are, at one extreme, albumin which carries most of the free fatty acids (FFA) of the plasma (about 1% lipid, 99% protein) and, at the other extreme, chylomicrons (99% lipid, chiefly triglyceride, and 1% protein). Actually neither of these two extremes is a true lipoprotein, since only small portions of albumin are functionally involved in the transport of FFA and chylomicrons have so little protein that they are insoluble in the plasma, belying one of the primary functions of lipoproteins, that is, to solubilize the transported lipids.

The low-density fractions (LDF) have a mobility of beta-globulins and are referred to as beta-lipoproteins. For the same reasons the high-density lipoproteins are called alpha-lipoproteins, since their mobility is in the alpha-globulin range. In the beta-lipoprotein group it can be recognized that, as the triglyceride proportion increases, that of other fractions decreases. These become progressively lower density lipoproteins (VLDL, $S_f$ 20–400) and are identified as pre-beta lipoproteins. These lipoproteins are engaged in the traffic of carrying triglyceride to adipose tissue throughout the body.

---

* Member of Executive and Teaching Staff, Department of Pathology, Doctors Hospital, 1815 Eye Street, N. W., Washington, D. C., and Pathologist, Oscar B. Hunter Memorial Laboratory.

Of the beta-lipoproteins, $S_f$ 0–12 is normally the largest fraction and contains the largest part of total cholesterol. For approximate concentrations, 129 mg, of a total of 216 mg, total cholesterol is accounted for by the $S_f$ 0–12 fraction. This is approximately 60%. In most conditions associated with hypercholesterolemia, rises occur in the beta-lipoprotein fraction while the alpha lipoprotein tend to remain constant.

### Idiopathic Hyperlipidemic States

Long before the period of modern analyses of plasma for lipids two classes of idiopathic hyperlipidemia had been recognized: one in which the fasting serum was milky and called essential familial hyperlipidemia, the other, in which the serum was clear but had an abnormally high concentration of cholesterol, was called essential familial hypercholesterolemia. The names imply a congenital defect as an etiologic factor. All patients with hyperlipidemia did not fit into the categories, and many discrepancies were apparent.

In the past decade many intensive investigations have been carried out on hyperlipemic patients in which all the modern techniques have been utilized in addition to classical analysis. These techniques include the use of analytic and preparative ultracentrifuges, electrophoresis on starch, paper, agarose agar and other media, precipitation with dextran and other high-molecular weight polymers, and precipitation with specific antisera. Fredrickson and his colleagues[1] have used these techniques to develop a new classification of hyperlipidemias based on the nature of the predominant lipoproteins present in the serum. The classification is admittedly incomplete, and the differences are at times too subtle to be easily recognized. Nevertheless, the classification represents the most sophisticated study available today.

### Type I Hyperlipoproteinemia

The most severe degree of hyperchylomicronemia is seen in patients who apparently are homozygous for a rare mutant gene regulating the activity of the clearing enzyme or enzymes. A more specific term for Type I would be "lipoprotein-lipase deficient familial hyperchylomicronemia". All familial Type I hyperlipoproteinemia ultimately may not turn out to represent lipoprotein-lipase deficiency, but this is the only biochemical defect currently recognized.

The clinical manifestations are sufficiently reproducible to present a "typical case history". It may begin in your office with the appearance of a mother whose one-month old child looks healthy but has bouts of colic and an unusually prominent abdomen. Recently some yellow papules with reddish base may have broken out over the skin and oral mucosa. Hepatosplenomegaly and lipemia retinalis are present. The blood sample looks like "cream of tomato soup". The lipoprotein pattern reveals chylomicrons in high concentration 14–16 hours after the last meal. A slight increase in the pre-beta and a decrease in the alpha and beta fractions may be present.

The baby's formula is changed to skim milk or other fat-free sources of calories. Within 3 days the hyperlipemia has cleared. The xanthomas resolve, the liver and spleen decrease in size, and the colic ceases.

Diet then is the treatment for Type I and consists of a moderate restriction of dietary fat. Patients usually do best on about 20–25 gm of fat per day. As far as the degree of saturation of the fatty acids in the dietary glycerides in concerned, the source of the fat makes no difference to the degree of hyperlipemia.

### Type II Hyperlipoproteinemia

By Type II lipoprotein pattern is meant an increase in the concentration of lipoproteins that have discrete beta mobility by electrophoresis. Type II hyperbeta-lipoproteinemia is one of the most common inheritable forms of hyperlipoproteinemia encountered. The major features form a triad. The first component is the lipoprotein pattern in the absence of other primary disease. The second is distribution of the Type II pattern in the family according to Mendelian concepts of an autosomal dominant trait. The third feature is xanthomatosis and atheromas. The most characteristic manifestation is tendinous xanthomas, located particularly in the Achilles tendons and the extensor tendons of the hands and feet. Often there are also tuberous xanthomas, particularly over extensor surfaces, including elbows, knees, hands, buttock or periorbital xanthelasmas. In severely affected subject, soft, tuberous xanthomas may appear at many sites over the body. A corneal arcus is common and assumed greater diagnostic significance the younger the age at appearance. Accelerated arterial disease, especially involving the coronary arteries, is a life-threatening feature. Some families may be relatively free of this manifestation, while others are seriously affected. Occlusive peripheral or cerebrovascular disease does not seem to be as common as coronary-artery disease in Type II.

Dietary management of Type II is justified and consists of a limited intake of cholesterol and the substitution of polyunsaturated for saturated fats. Substitution of skim milk for whole milk products, severe restriction or even elimination of egg yolks, and reduction in meat intake for a daily intake of about 100 mg of cholesterol and 20–30 gm of fat is one of the most effective dietary regimens.

Many drugs have been used in treatment of hypercholesterolemia.

Cholestyramine (Questran, Cuemid) binds bile acids and prevents their reabsorption. This increases the catabolism of cholesterol and may also interfere with its absorption. It is administered by mouth in doses of about 24 gm/day. The dosage must be adjusted to avoid serious malabsorption of fat, and some patients find its bulk and taste unpleasant.

B-sitosterol also interferes with cholesterol absorption, but its effect is rarely dramatic.

C-thyroxine, sometimes lowers cholesterol, possibly by increasing its catabolism. It is still debatable whether this action is independent of an increased metabolic rate, which can be a serious side-effect if coronary-artery disease is present.

The biochemical defect has not been verified, but is believed to be a decrease in the catabolism of the beta-lipoprotein.

## Type III Hyperlipoproteinemia

Type III or "broad band beta" hyperlipoproteinemia is the result of a Mendelian recessive allele which produces the biochemical defect of difficulty in clearing both beta-lipoprotein and triglycerides. Type III hyperlipoproteinemia is an excess of lipoproteins that have a beta mobility but abnormally low density. The resulting lipoprotein pattern is a broad, intensely staining lipoprotein band beginning in the normal B-zone but extending continuously into the pre-B region. Ultracentrifugation reveals most of the lipoprotein band having beta mobility in this fraction to have a density less than 1.006 in contrast to the other hyperlipoproteinemias in which their B-band has a density greater than 1.006. The predominant abnormalities are lower than normal concentrations of $S_f$ 0–12 lipoproteins, moderate increases in $S_f$ 12–20, marked increases in $S_f$ 20–100, and often the $S_f$ 100–400 subclasses.

In Type III the plasma cholesterol concentration varies from 200 to more than 4000 mg, and the triglycerides from 175–1500 mg. Extreme variability of cholesterol and triglyceride concentrations is a diagnostic feature and a contrast to the steady elevation in Type II.

Xanthomas also occur in Type III as in Type II, as do thickened tibial tuberosities, corneal arcus, and xanthelesmas. The distinctive lesions in Type III are found on the palmar surfaces of the hands. The creases and sometimes the tips of the fingers or other areas, especially where rings are worn, contain yellow-white deposits that rise a little above the surface. Such lesions are not typical of any other type of primary hyperlipoproteinemia.

The lipoprotein levels in Type III are quite sensitive to changes in the content of the diet and the amount of total calories. If a patient is switched from a regular diet to one rich in polyunsaturated fats and containing 100–200 mg of cholesterol both the cholesterol and triglyceride concentrations may be lowered severalfold within a few weeks. Triglyceride concentrations tend to rise moderately on high-carbohydrate diets, but Type III is not always accompanied by carbohydrate inducibility exceeding the response of normal subjects. Carbohydrate intolerance, however, is the rule over 90%, and the ability to handle a glucose tolerance test seems to decrease with age faster than it does in the normal state. If the patient with type III is fed 150 gm of fat per day, small accumulations of chylomicrons may be present on testing even after an overnight fast.

The prognosis in Type III is uncertain. Patients have reached the seventh decade, usually with evidence of vascular disease. It seems reasonable to use conservative means to lower plasma lipid concentrations which are characteristically labile and responsive to diet alone. Weight-reduction is one key to reduction of plasma lipids in Type III and is always effective if the patient is overweight. After ideal weight is reached it may be maintained by diets containing 40–50% of calories from fats high in polyunsaturated fats and as low in cholesterol as practical. Even if normal lipid levels are again achieved the "broad beta band" will persist.

Chlorophenoxyisobutyric acid (Chlofibrate) is usually given by mouth in doses of 2 gm/day and is dramatically effective in some kinds of hyperglyceridemia; its mode of action is unknown and thus far proved to have little toxicity.

## Type IV Hyperlipoproteinemia

Type IV hyperlipoproteinemia is the hallmark of endogenous hyperlipemia. It implies that glycerides synthesized in the body, usually in the liver, have been excreted into the plasma at rates exceeding the capacity for removal. The appearance of a Type IV pattern often suggests that something has gone wrong with carbohydrate metabolism or caloric balance.

This pattern is a valuable indicator of metabolic imbalance and does not describe a specific disease. An increase in both glycerides and cholesterol is usually present.

Patients with Type IV may show eruptive xanthoma, lipemia retinalis and foam cells in the marrow and RE system. They are also subject to bouts of abdominal pain with or without chemical signs of pancreatitis. Hyperuricemia also occurs in hyperlipemia with variable frequency. Secondary Type IV can occur in thin, non-diabetic subjects; so can the primary Type IV, but in these excessive body weight and abnormal glucose tolerance are extremely common (90% with familial pattern).

All evidence concerning the association of coronary-artery disease and pre-beta lipoproteins is retrospective, but the consensus indicates a positive correlation at least in relatively young men. Noteworthy is the finding of a much higher concentration of pre-beta lipoproteins in males who had a myocardial infarction than in controls. The possibility that many patients with infarcts are placed on very low-fat and hence high-carbohydrate diets may be a factor enhancing the lipoprotein abnormalities.

Since the lipoproteins change after the myocardial infarct, i.e., FFA, beta and cholesterol, pre-beta and — ↑ FFA, ↓ beta and cholesterol, ↑ pre-beta and triglycerides, it is best to test lipoproteins about two months post-infarction.

Secondary Type IV hyperlipoproteinemia may be seen in diabetes mellitus, pancreatitis, alcoholism, glycogen-storage disease, idiopathic hypercalcemia, hypothyroidism, nephrotic syndrome, dysglobulinemia, and in women taking gestational hormones.

The treatment of primary Type IV presently includes weight control, avoidance of excessive dietary carbohydrate, and hypolipemic agents in that order. Obese patients with Type IV who are brought to ideal weight will have a dramatic improvement in lipoprotein patterns and usually in glucose tolerance. Glucose inducibility can be tested, and most patients will have less hyperlipemia if they maintain ideal weight on a diet in which 50–70% of calories come from fats, particularly unsaturated, low-cholesterol sources. If this program does not lower plasma glycerides to below 400 mg % drug therapy may be considered. The orally administered antidiabetic agents may be considered, although they do not reduce lipoprotein patterns to normal level in some patients. Hypolipidemic agents such as chlorophenoxyisobutyric acid and nicotinic acid may also be effective.

### Type V Hyperlipoproteinemia

There are some patients on a regular diet who have chylomicrons and increased amounts of pre-beta lipoproteins in the usual post-absorptive sample. The Type V pattern has been reserved to designate this combination of exogenous and endogenous hyperlipemia. It may be merely a stage of Type IV produced by sudden imposition of a heavy load of dietary fat on clearing mechanisms intolerably burdened by endogenous glycerides. Type V could be a genotypic variant of Type IV, possibly in terms of homozygous expression of the same mutant or because of the interaction of other genes.

The lipoprotein pattern reveals chylomicronemia and pre-beta hyperlipoproteinemia. Cholesterol and triglycerides are elevated but in proportions too variable to be helpful in diagnosis. Simple observation of the plasma after it has sat overnight in the cold can be helpful. As in Type I, the chylomicrons appear as a creamy layer at the top, but in Type V the infranatant layer remains lactescent.

Both males and females are affected, and symptoms frequently occur in the late teens or the third decade. The commonest complaint is recurrent abdominal pain and occasionally surgeons find milky fluid in the peritoneal cavity. Sometimes eruptive xanthomas on the knees, buttocks, shoulders and back may be noted first by the patient. The patients are often obese and frequently have a history of diabetes. Evidence of accelerated atherosclerosis has not been striking. Hyperuricemia may or may not be present. Glucose tolerance is almost invariably abnormal.

The contrast with Type I is important. Patients with Type I usually have symptoms beginning in infancy. There is no relation of their hyperlipemia to obesity or diabetes. The levels of post-heparin lipolytic activity in Type I are distinctly reduced, while in Type V they are usually in the range of normal. The fall in hyperlipemia with a fat-free diet is usually rapid in both, but the glyceride level is much more dependent upon dietary fat intake in Type I. Type V is much more affected by negative caloric intake.

Secondary Type V hyperlipoproteinemias may be seen in insulin-dependent diabetes, chronic pancreatitis, and alcoholism.

The treatment of Type V beyond dietary management has not been fully developed. Weight reduction in the obese patients is an excellent way to decrease hyperlipemia. Diets, neither high in fats nor carbohydrates, should be used in maintenance. The patients must be followed carefully, both to forestall

TABLE I: Primary Hyperlipoproteinemias

| Type | Appearance | Cholesterol | Trigylceride | Electrophoretic Bands | Analytical Ultracentrifuge | GTT, ETC. | Secondary Disorders Mimicking Primary |
|---|---|---|---|---|---|---|---|
| I | Milky | ↑ ± | ↑ ↑ ↑ | Chylomicrons present; all others ↓ | $S_f$ 100–400 ↑ | Normal | Uncontrolled diabetes, pancreatitis, alcoholism |
| II | Clear | ↑ ↑ ↑ | N or ↑ | B ↑↑↑<br>Pre B ↑ ± | $S_f$ 0–12 ↑↑↑<br>20–100 ↑ ± | Usually Normal | Diet with high saturated fats and/or cholesterol. Hypothyroidism, obstruc-hepatic disease, hypoproteinemia, myeloma, macroglobulinemia |
| III | Turbid | ↑ ↑ | ↑ | "Broad B"<br>Pre B ↑ ± | $S_f$ 0–12 ↓<br>12–100 ↑↑ | Usually Abnormal | None |
| IV | Turbid | ↑ | ↑ ↑ | Pre-B ↑↑↑ | $S_f$ 0–12 N or ↓<br>20–400 ↑↑↑ | Usually Abnormal Uric Acid, N or | Diabetes, pancreatitis, alcoholism, glycogen storage, hypothyroidism, nephrotic syndrome, pregnancy, progesterone analogs, gout, Gaucher's; hyperglobulinemia |
| V | Turbid or Milky | ↑ | ↑ ↑ | Chylomicrons present<br>Pre -B ↑ ↑ | $S_f$ 20–400 ↑ | Usually Abnormal Uric Acid, N or ↑ | Diabetes, alcoholism, chronic pancreatitis |

* B= Beta.

gain in weight and to discourage intemperance in alcohol. Whenever severe endogenous hyperlipemia develops, care must be taken to reduce both calories and carbohydrates until improvement develops, since a sudden switch to isocarloric high-fat diets may produce an abdominal crisis.

Nicotinic acid has been used as an adjunct to therapy.

Table 1 summarizes the differential data.

## Conclusion

Electrophoretic separation of lipoproteins in conjunction with cholesterol and triglyceride determination provides a useful and practical lipid evaluation in the ordinary circumstances. Unfortunately, there are situations in which the expected lipid alterations are not always those anticipated from the electrophoretic pattern. This indicates that this procedure like many others in the laboratory is but a useful guide in the management of lipid abnormalities albeit the best currently available. This procedure also provides the opportunity to evaluate the secondary lipid derangements and to assess their fluctuation during therapy. A 12–16 hour fast, preferably absolute, is recommended for reliable results.

## Reference

1. FREDRICKSON, D. S., LEVY, R. L., and LEES, R. S.: Fat transport in lipoproteins: An integrated approach to mechanisms and disorders. New Eng. J. Med., 1967, 276, 148, 215, 273.

# Cancer of the Prostate Simulating Cancer of the Rectum: The Digital Dilemma

## Report of Three Cases

CLARE A. STEIN, M.D.* and WILLIAM P. HERBST, III, M.D.†

THERE HAVE BEEN ISOLATED reports of carcinoma of the prostate simulating lesions of the rectum. Many observers have emphasized the relative rarity of rectal-wall involvement by prostatic carcinoma. The main spread is emphasized by Edwards[1] in his study of autopsy material. "Vascular spread is seldom demonstrable in histologic preparations, extension along lymphatic channels within the gland and beneath the capsule, however, is commonly described even in early cases. The lymphatics abound along the course of the nerve bundles, and invasion by epithelial elements of these perineural lymph spaces with or without actual involvement of the nerve fibers themselves is pathognomonic." Most autopsy series report an incidence of rectal-wall involvement of less than 5% in patients dying from prostatic carcinoma.

Recently 2 patients with annular constricting rectal lesions clinically diagnosed as carcinoma of the rectum were found on autopsy to have carcinoma of the prostate with extensive involvement of the rectal wall including the mucosa.

### Report of Cases

Case 1. Mr. H. S., a 65 year-old man, complained of progressive anorexia and constipation of 6 months' duration. His infrequent stools were firm, small in caliber, and contained no blood. For 3 months his urinary stream had weakened considerably, and he voided frequently in small amounts.

Physical examination revealed a firm, fixed, slightly tender suprapubic mass. On rectal examination, an annular, firm, irregularly constricting mass was felt 6 cm from the anus. The prostate could not be delineated from this mass. On proctoscopy, the lumen was remarkedly narrowed by the annular lesion. The overlying mucosa was heaped up and edematous but intact. Biopsy revealed inflammatory tissue.

The hemoglobin was 7 gm or 50%. Urinalysis revealed many RBC with a trace of albumin. Residual urine was 600 cc, BUN 47 mg, and acid phosphatase 0.0 Bodansky units.

Pyelography demonstrated bilateral hydronephosis and hydroureter with poor renal function. There were metastic osteoblastic lesions of the pelvis and lumbar vertebrae.

The patient was placed on catheter drainage and given supportive therapy, but the course was rapidly downhill, and death occurred 2 weeks after admission. Clinical diagnoses were carcinoma of the rectum with metastases to the pelvis and lumbar vertebrae, and benign prostatic hypertrophy

At postmortem examination, there was extensive carcinoma of the posterior portion of the prostate with circumferential involvement of the adjacent rectum from without, infiltrating all layers of the bowel including the mucous membrane. The bladder, seminal vescicles, regional lymph nodes, pelvis, and lumbar vertebrae were also involved.

Microscopically the carcinoma was markedly anaplastic with little tendency to acinar formation and with extensive lymphatic invasion.

Case 2. Mr. A. D., a 78-year-old man complained of increasing frequency of urination, dysuria, and weakening of the stream for 3 months. Constipated for many years, he denied any recent change in bowel habits, and his stools contained no blood.

The bladder was distended with a residual urine of 480 cc. On rectal examination, in the anterior and right lateral wall at the level of the prostate an irregular nodular mass was felt. On proctoscopy the overlying mucous membrane was heaped up, firm and edematous, but no ulcerations were present. The lumen was so narrowed by the lesion that the scope could not be passed beyond 15 cm. Biopsy revealed adenocarcinoma with lymphatic involvement, thought to be primary rectal carcinoma.

The hemoglobin was 10 gm or 78% BUN 53 mg%, acid phosphatase 2.6 Bodansky units, and alkaline phosphatase 2.2 Bodansky units. The urine contained a trace of albumin and 1-2 WBC.

Pyelography revealed poor renal function and hydronephrosis bilaterally. Cystoscopy revealed some median-bar obstruction, and tissue from the bladder neck showed chronic inflammation. Barium enema revealed irregular tenuous obliteration of the mucosal pattern of the rectum and rectosigmoid. This area was more anterior to the sacrum than normal, suggesting a large extrinsic circumferential component (Figure I). Roetgenologic interpretation: large carcinoma of the rectum. Skeletal and chest X-ray films revealed no metastases.

---

* Educational Officer, Department of Surgery, Doctors Hospital, 1815 Eye Street, N. Y., Washington, D. C.

† Chief, Division of Urology, Doctors Hospital, Washington, D. C.

The patient required a colostomy because of increasing large-bowel obstruction, at which time a fixed, firm pelvic mass was felt. The course was gradually downhill, and death occurred 7 weeks after admission. The clinical diagnoses were carcinoma of the rectum and benign prostatic hypertrophy.

At postmortem examination extensive carcinoma of the prostate was found breaking through Denonvillier's fascia, and infiltrating all layers of the rectum including mucous membrane. The perivesical tissue and right ureter were also invaded and several small metastatic foci were found in the lungs. Microscopically the tissue was adenocarcinoma of the prostate with the usual configuration.

A third case properly diagnosed. An 84-year-old man give his chief complaint as decrease in caliber of the stool of 3 months' duration. He also reported some increase in frequency of urination and decrease of his urinary stream for 1 or 2 years. Urinalysis was within normal limits. The prostate was firm, broad, and fixed. There was an annular constriction around the rectum, not involving the mucosa at about the level of the apex of the prostate. It was difficult to separate the 2 lesions. An acid phosphatase was within normal limits. Chest X-ray films and intravenous pyelograms revealed no evidence of metastatic disease; but, there was no evidence of function in the left kidney, with moderate hydronephrosis and hydroureter down to the level of the bladder on the right.

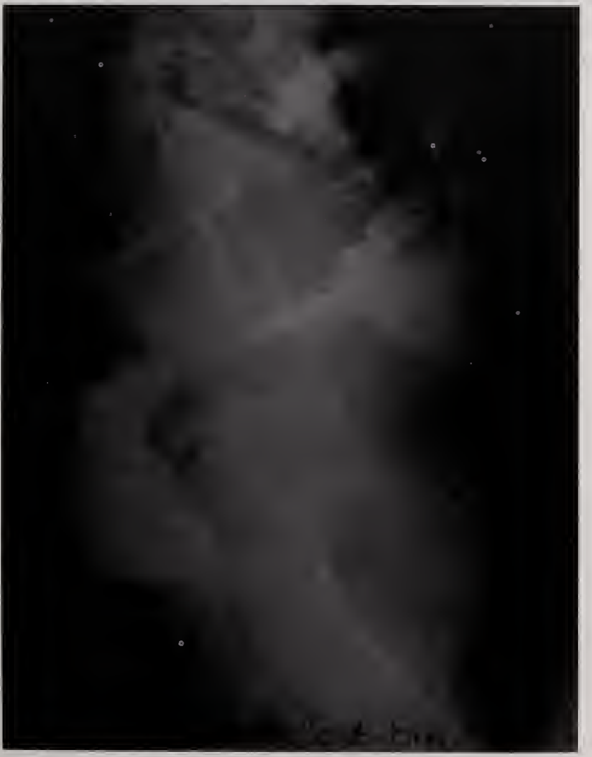


FIG. 1. Pre-evacuation film was similar and not as distensible as it should have been.

On May 26, 1970 cytoscopy and needle biopsy of the prostate were performed. Pathological findings revealed adenocarcinoma of the prostate, grade II. Two days later bilateral orchidectomy was carried out. Since discharge, both the rectal and the urinary complaints have improved considerably.

Four months postoperatively the prostate did not feel much different than on first examination, but the annular ring has almost entirely disappeared. Pyelograms at this time revealed function on the left with dilation down to the bladder and improved function on the right with less obstruction. The acid phosphatase is still normal.

## Discussion

The posterior lobe of the prostate is in close proximity to the adjacent rectum, and one would expect carcinoma of the prostate to invade the rectal wall early, but autopsy studies in patients dying from carcinoma of the prostate do not substantiate this.

Young[2] in 1909 reported only 1 case of rectal mucosal involvement in 111 cases of carcinoma of the prostate, and Arnheim[3] found only 1 case of actual rectal wall involvement in 176 cases.

Tough Denonvillier's fascia has been credited with protecting the rectal wall from invasion by carcinoma.

Rectal symptoms may arise from actual rectal-wall involvement, as in our 3 cases, or by perirectal lymphatic invasion, both of which narrow the rectal lumen. Occasionally a colostomy for diversion is required.

In our 2 fatal cases the entire rectal wall, including the mucosa, was infiltrated by carcinoma, and on rectal biopsy our second case revealed adenocarcinoma involving the rectal mucosa and submucosal lymphatics (figure 2). Kickham in 1936[4] reported 4 cases of carcinoma of the prostate with predominantly rectal symptoms and minimal or no urinary symptoms, and 2 of these had rectal-wall involvement, not involving the mucosa. Winter[5] reported 32 cases of prostatic cancer involving the rectum from a 4-hospital study which presented a problem in differential diagnosis. This was approximately 10% of all the prostatic carcinomas. On further analysis, utilizing his classification of involvement, he found approximately 6% of the patients with prostatic cancer had either annular stenosis or mucosal involvement as in our 2 cases.

It should be emphasized that carcinoma of the prostate by rectal extension may successfully mimic a rectal carcinoma. Possibly Denonvillier's fascia is not

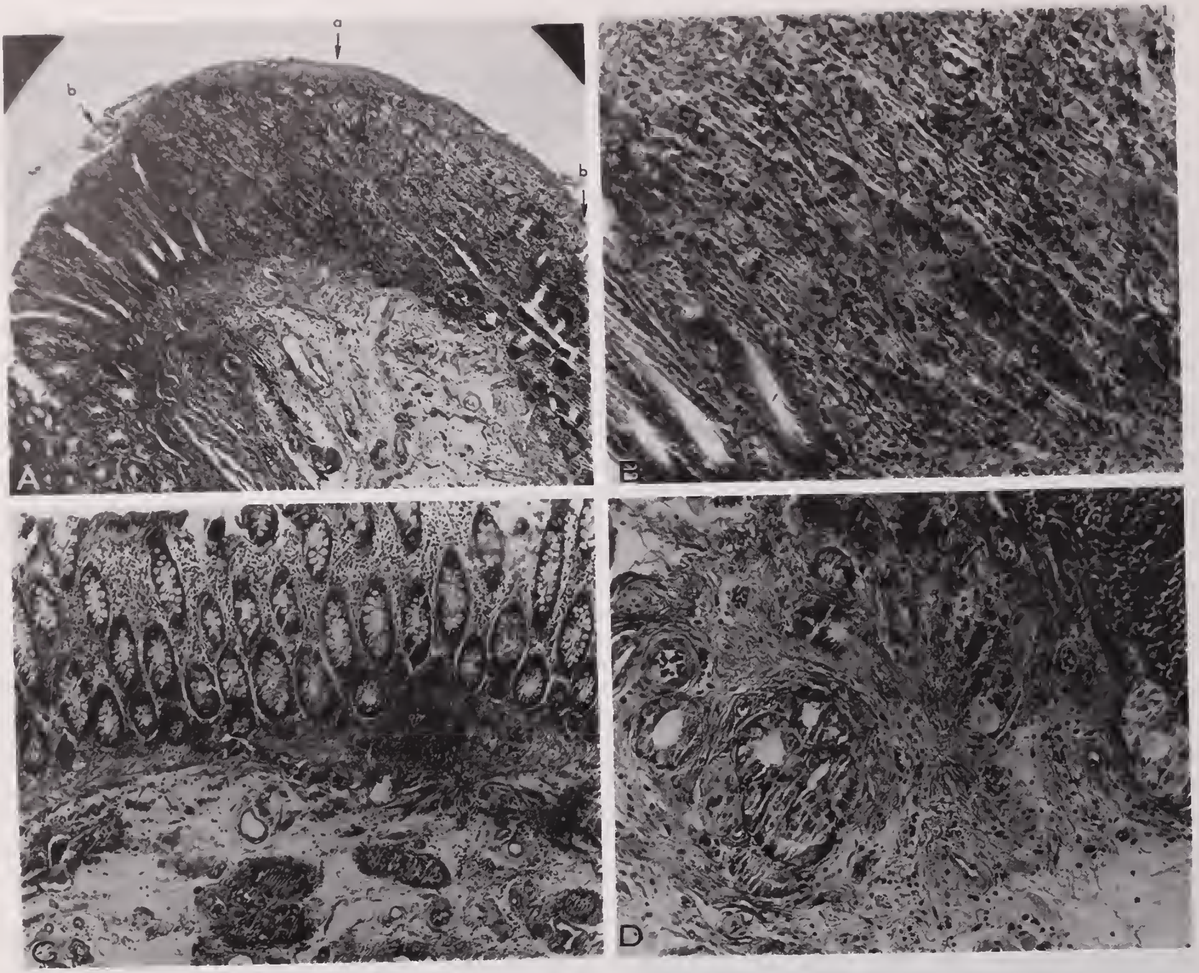


**FIG. 2.** A. Rectal biopsy. B. High-power of same. C. Low-power of submucosal lymphatic invasion with adjacent normal rectal mucous membrane. D. High-power of submucosal lymphatic invasion.

as rigid a barrier to carcinomatous invasion as heretofore thought, and closer review may reveal a higher incidence of rectal spread. The therapeutic considerations are obvious.

## References

1. EDWARDS, C. N., STEINTHORSSON, E., AND NICHOLSON, D.: An Autopsy Study of Latent Prostatic Cancer. Cancer, 1953, 6, 531.
2. YOUNG, H. H.: Cancer of the Prostate. Ann. Surg., 1909, 50, 1144.
3. ARNHEIM, F.: Carcinoma of the Prostate. J. Urol., 1948, 60, 599.
4. KICKHAM, C. J. E.: Carcinoma of the Prostate Simulating Rectal Malignancy. J. Urol., 1936, 35, 342.
5. WINTER, C.C.: The Problem of Rectal Involvement by Prostatic Cancer. Surgery, 1957, 105, 136.

# Microscopic Laryngoscopy and Laryngeal Surgery

LOUIS B. BALLA, M.D.*† AND PAUL ELSBERG, M.D.‡

THE OPERATING MICROSCOPE was originally developed for ear surgery about 15 years ago. Its use was accepted with overwhelming enthusiasm by the otologists. Other surgical specialties have recognized the advantages offered by increased magnification, binocular vision, and the ease of performing surgical procedures bimanually, thus permitting more delicate reconstructive surgical techniques.

### General Consideration

The yearly laryngeal cancer-death rate reaches 3,000, which accounts for 1% of all cancer-death rates for 1969 in this country. About 7,000 new cases are estimated for 1970.[1] Taking into consideration the fact that early cancer of the vocal cords offers close to a 90% cure rate, early detection is of paramount importance. It can easily be forseen that in a not too distant future mass-screening methods for vocal cord and other laryngeal pathology can be perfected, following the example of various routine diagnostic procedures such as ECG, chest X-ray films, CBC, urinalysis, and chemical profile. von Leden and others[2] are engaged in pioneering work recording and analyzing normal and pathologic voices and programming them to a computer. This computer technique and application for mass screening at regular intervals, especially for smokers, would offer an excellent prophylactic measure and increased salvage rate for laryngeal diseases, but until the computer technique is developed the armamentarium of the otolaryngologists remains:

It is customary for otolaryngologists to analyze people's voices during conversation; and if changes are recognized, this would lead to further examination and not infrequently to unsuspected pathologic findings. If an early malignancy is detected, the prognosis for cure is greatly enhanced. Malignant laryngeal pathology usually occurs in the fifth decade or later, rarely before. Since presbycusis sometimes begins at about that age, discrimination of finer vocal changes is impaired, and these patients are not aware of the early voice changes. One of us has seen a few patients on routine otological consultation who had early carcinoma of the vocal cords with voice changes of which the patients were not aware.

The indirect laryngoscopy which was developed by Garcia and Czermak in 1858 still remains the most important diagnostic examination. The larynx is examined with the aid of a head mirror, reflecting light, and laryngeal mirror. This allows an excellent visualization of the base of the tongue, valleculae, epiglottis, lateral laryngopharyngeal wall, pyriform sinuses, vocal cords, and part of the trachea. In the majority of cases this examination can be performed without difficulty, but occasionally topical anesthesia is required. This should be used carefully, since occasionally adverse reactions to the anesthetic agent may occur.

If further investigation is required the patient is admitted to the hospital for a direct laryngoscopy and biopsy. The hospitalization usually requires 48 hours or less. Most of the endoscopic procedures are carried out under general anesthesia. Voice rest and no smoking are ordered for 1 week postoperatively, and regular diet is resumed 1 or 2 days after the operation.

### Anesthesia

In recent years several authors have dealt with this subject. Adriani[3] is one of the latest to discuss it in detail. This increased interest is hailed by otolaryngologists as a major step forward to perfect a uniformly acceptable technique.

The technique developed for endoscopic anesthesia in more than 8,000 cases during a period of 20 years at Doctors Hospital of D. C. is based on safety, decreased discomfort to the patient, and a team approach to employ better diagnostic and operative procedure.

We feel strongly that endoscopic procedures like any other operations should be performed in a well-lighted operating room. Endoscopy in a dark room should be relegated to the past. Nothing is gained by darkness, and much is at stake concerning the safety of the patient. Only by observing the patient directly can we be aware of the early signs of distress. Change in the patient's color is certainly one of the earliest and most reliable warning signs. Our built-in monitors, eyes, ears, and touch can be utilized best in a well-lighted room. The surgeon's visualization is not handicapped by the lighted-operating room. In fact, the various members of the team cannot function efficiently in a dark room.

---

* Attending Otolaryngologist, Executive and Teaching Staff, Doctors Hospital, 1815 Eye Street, N. W., Washington, D. C.

† Winner of the First Award with Geza J. Jako, M.D., for the exhibit on Microscopic Laryngoscopy at the Scientific Exhibit of the Medical Society of the District of Columbia, September 9–11, 1970.

‡ Senior Attending, Department of Anesthesiology, Executive and Teaching Staff, Doctors Hospital.

Request for reprints should be sent to Louis B. Balla, M.D., 916–19th Street, N. W., Suite 214, Washington, D. C. 20006.

The technique of anesthesia for endoscopic procedures is as follows:

The patient is placed on the operating table in the supine position. The equipment is checked by the team to ascertain that it is in perfect working order. The blood pressure and pulse are checked and monitored continuously during the procedure. An intravenous infusion of glucose in water is started. Both pyriform sinuses are swabbed with a cotton pledget dipped in 10% cocaine with a Jackson angulated-laryngeal forcep to anesthesize the laryngopharynx and the superior laryngeal nerves.

A short-acting barbituarate, sodium penthotal, is administered through the intraveneous tube, the dose depending upon the condition of the patient. The average adult dose for routine laryngoscopy and bronchoscopy is between 200 and 300 mg. As soon as the patient is asleep, a single dose of succinyl choline, 40 mg or more, is given intravenously. The patient is hyperventilated for 2 minutes with 100% oxygen, and as soon as complete relaxation is achieved the surgical procedure, direct laryngoscopy or bronchoscopy, is performed, allowing the surgeon 2 to 3 minutes to work. For bronchoscopy oxygen is given by insufflation attached to the side arm of the bronchoscope during the procedure. If more time is required the anesthesia procedure is repeated. For esophagoscopy and microscopic laryngoscopy the patients are intubated with a No. 26 French or a smaller endotracheal tube and a mixture of nitrous oxide and oxygen is given instead of 100% oxygen.

The patients usually respond rapidly and wake up soon after the completion of the procedure. In case of an increased coughing paroxysm, Benadryl up to 50 mg is given intravenously. This proved to be a very efficient way to reduce the coughing. The patient returns to his room after a short stay in the Recovery Room.

## Direct and Microscopic Laryngoscopy

The discovery of indirect (mirror) laryngoscopy is attributed to Manuel Garcia, the famous singing teacher at the Royal Academy of Music in London. At about the same time in 1858 Czermak developed the technique, which remains the basic diagnostic laryngeal examination. Lewin, von Brusen, and Walker are credited with the first biopsies of laryngeal tumors by indirect laryngoscopy, but the various minor surgical procedures through indirect laryngoscopy did not gain wide acceptance. Recognizing the shortcomings and difficulties of this technique, which requires great skill, good relaxation, and anethesia of the larynx, Kierstein of Berlin developed the technique of direct laryngoscopy in 1894. The basic concept of this procedure has not changed much since that time. It consists of direct visualization of the larynx and related structures through a distally or proximally illuminated metal tube. Yankauer in 1910 attempted to obtain an enlarged view of the laryngeal structures and developed a laryngoscope with a magnifying lense attached to its proximal end. In 1909 Gustave Killian of Vienna developed the suspension laryngoscope, a self-retaining apparatus with a blade that could lift up the tongue and the epiglottis and allowed the use of both hands and binocular vision for surgical procedures on the larynx and related structures. Killian presented his instrument at the International Laryngological Congress in Boston in 1911. Robert Lynch[4], a young American Laryngologist impressed by the new instrument, improved and perfected it in the ensuing years.

Progress was slow for Killian, Lynch, and others because with topical anesthesia it was difficult to obtain good relaxation and supression of pain to perform more refined and prolonged endolaryngeal procedures. It was not until the 1950's that better anesthetic agents and methods were developed for endoscopic procedures resulting in a more rapid evolution in the techniques of laryngoscopy up to its present form.

Scaleo[5] in 1960 first described the use of the operating microscope for laryngeal examination and surgery through the suspension laryngoscope. Kleinsasser[6] in 1960 devised a monocular laryngoscope with a proximal end-magnifier, but this excellent diagnostic instrument had surgical limitations. At about the same time Jako in Boston developed and refined the various techniques and instruments offering practical application in diagnostic and surgical microlaryngoscopy. The instrument (figure 1) is a modified Yankauer-Hollinger 175 mm long-fiber optic laryngoscope. A self-retaining Lewy chest holder supports the laryngoscope on a Mayo stand positioned over the patient's chest (others may use the Killian gallows designed originally for the

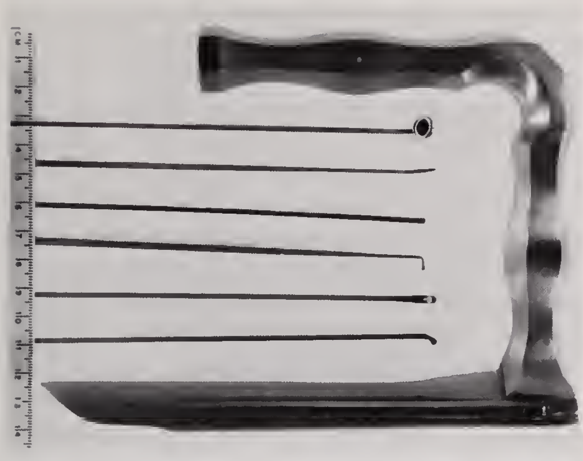


FIG. 1. Jako Fiber optic laryngoscope and microlaryngeal instruments. From top to bottom: laryngoscope, mirror, knife, suction tube, hook, straight and angulated cup forceps.

suspension laryngoscope) as a self-retained device. The larynx is examined with the Zeiss operating microscope (figure 2) modified for laryngoscopy. Jako[7] and others developed microlaryngeal instruments (figure 1)–mirror, knife, suction tube, hook, and cup forceps. The endolaryngeal structures can be manipulated and palpated, and the subglottic area can be inspected with the small mirror. Early mucosal changes can be more easily detected with binocular vision. The higher magnification and the bimanual surgical technique enable us to perform accurate and delicate procedure with minimal trauma to the vocal cords and related structures. During the operation the small endotracheal tube, which usually lies in the posterior portion of the larynx, is easily displaced in order to inspect all parts of the larynx. Figures 3 and 4 illustrate a squamous papilloma of the vocal cords and anterior commissure. With the increased magnification of the operating microscope up to X25 and with small microlaryngeal instruments and cup forceps, all papillomatous lesions from the anterior commissure and posterior one third of the right vocal cord can be removed. Both the extent and depth of the pathologic tissue are easily identified, hence greatly reducing the possibility of recurrence. In the past this troublesome disease required repeated and numerous operations because complete removal seemed to be impossible.

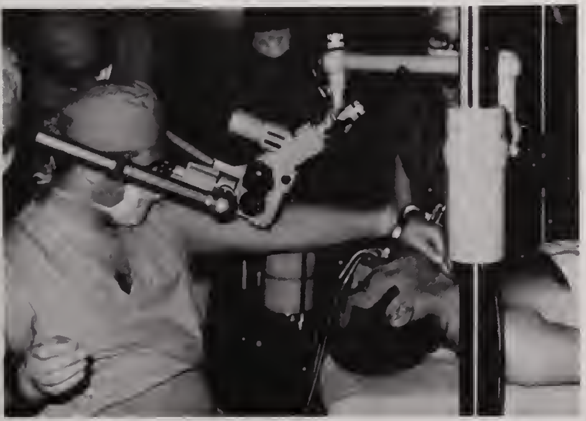


FIG. 2. Microscopic laryngoscopy. Teaching available by the use of observation tubes on each side of microscope.

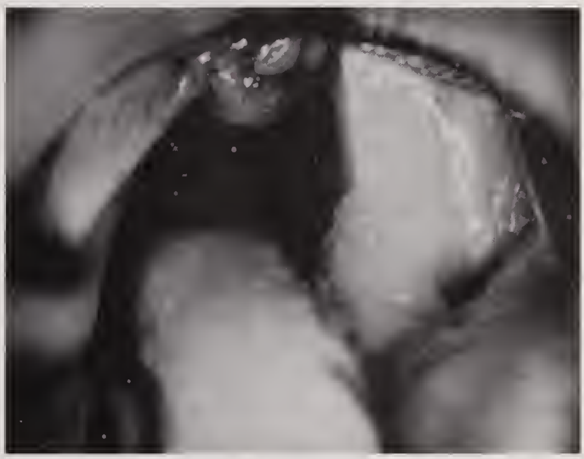


FIG. 3. Squamous papilloma involving anterior commissure, anterior third of both vocal cords, and posterior half of right vocal cord. The endotracheal tube lies in posterior portion of larnyx.

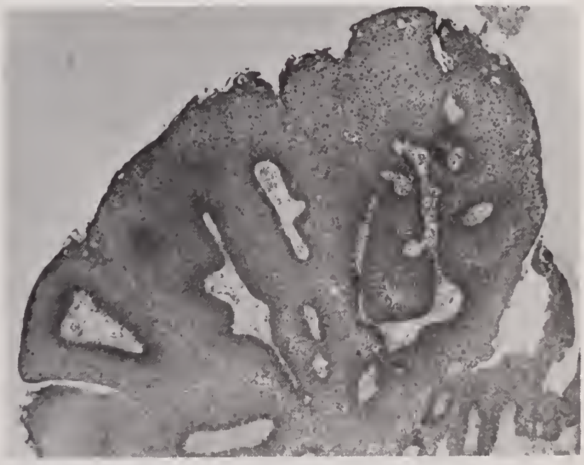


FIG. 4. Specimen removed from vocal cords in Fig. 3 showing the proliferating benign epithelial tumor of papillary structure having a core of vascular connective tissue.

Microscopic laryngoscopy and laryngeal surgery have been used in more than 30 cases in the past 2 years. The following case histories illustrate the advantages of this technique.

A 66 year-old woman, a heavy smoker, was examined for hoarseness of 1 year's duration. Indirect laryngoscopy revealed a chronic polypoid laryngitis; the polypoid edema involved all but the most anterior part of both vocal cords. Stripping of the vocal cords in this case would have required 2 operations by the conventional direct laryngoscopy to avoid injuring the mucous membrane of the anterior commissure with resulting adhesions or webb. With the microlaryngeal technique the stripping of the edematous membranes was accomplished in one operation, thus avoiding the danger of post-operative adhesions.

A 62 year-old woman was examined for chronic hoarseness. A large polypoid mass was seen by indirect laryngoscopy which obstructed the anterior half of the laryngeal inlet. The above described technique allowed us to trace the origin of the mass into the right ventricle, and it was removed entirely from its floor.

In a 74 year-old man with hoarseness of 2 months' duration, indirect laryngoscopy showed a benign-looking polypoid lesion of the left vocal cord. The surgical microscope revealed increased vascularization of the left vocal cord and structural changes of the epithelium. With the small endolaryngeal mirror the extent of subglottic extension was assessed and biopsy specimens taken from strategic locations. The diagnosis of squamous-cell carcinoma was established and X-ray therapy instituted with maximum benefit and minimum disability because the exact location and extent of the tumor had been determined.

## Summary

We have reviewed the history and evolution of laryngeal examination, anesthesia, and surgery. The technique of anesthesia described has been employed at Doctors Hospital, Washington, D. C., over the past 20 years for endoscopic procedures in a total of 8,000 cases. Microscopic laryngoscopy and laryngeal surgery exploit the advantage of increased magnification and tridimensional vision offered by the operating microscope. The self-retaining laryngoscope allows bimanual surgical techniques and the use of more refined micro-instrumentation. The case histories presented depict the solution of typical problems encountered in 30 operations over the past 2 years by utilization of this technique.

## References

1. 1970 Cancer Facts and Figures: American Cancer Society.
2. VON LEDEN, H., AND KOIKE, Y.: Detection of laryngeal Disease by Computer Technique. Arch. Otolaryng., 1970, 91, 3.
3. ADRIANI, J.: Anesthesia for Endoscopy. Ann. Otolaryng., 1969, 78, 1129.
4. LEJEUNE, F.: The History of Suspension Laryngoscopy and Bronchoscopy. Mississippi Doctor, 1939, 17, 83.
5. SCALEO, A., SHIPMAN, W., AND TABB, H.: Microscopic Suspension Larynoscopy. Ann. Otolaryng., 1960, 69, 1134.
6. KLEINSASSER, O.: Microlaryngoscopy and Endolaryngeal Microsurgery. Philadelphia: Saunders, p. 6, 1968.
7. JAKO, G.: Largyngoscope for Microscopic Observation, Surgery and Photography. Arch. Otolaryng., 1970, 91, 196.

# Carbon Monoxide in Health and Politics* †

HAROLD M. SILVER, M.D.‡

TO THE PHYSICIAN atmospheric pollution is often a remote subject consisting of many types of chemical compounds with confusing concentrations, clouded by unscienfific speculation and political confrontation. However, if it significantly relates to health, some information for physicians seems appropriate. The purpose of this report is to discuss a specific compound, carbon monoxide (CO), which has been well studied and to describe its physiological effects and its implications for environmental pollution.

CO is a colorless, odorless, tasteless, non-irritating gas with a molecular weight of 28. Its most important property in relation to toxicity is its ability to combine with hemoglobin to form carboxyhemoglobin (COHB). Its affinity for hemoglobin is 210 times that of oxygen, and when it replaces oxygen in the hemoglobin molecule the ability of the blood to carry oxygen to the tissues is impaired and tissue hypoxia is the consequence. The second effect of COHB which impairs oxygen delivery is shifting of the dissociation curve of oxyhemoglobin to the left so that oxygen released by hemoglobin at the tissue level is decreased.

The clinical effects of CO are usually related to the percent of COHB present in the blood.[1] If COHB is less than 10% there are no symptoms, but when it reaches 10 to 20%, frontal headaches, giddiness and dilatation of blood vessels may occur. At 20 to 30%, headache and throbbing of the temples is present, and at 30 to 40%, severe headaches, weakness, dizziness, dimness of vision, nausea, vomiting and shortness of breath may occur. When the level reaches 40 to 50% there is collapse or loss of consciousness and when it goes above 50%, coma, convulsions, irregular breathing and death ensue. Should the acute episode of CO poisoning terminate before death, neurological symptoms as a result of hypoxic brain damage may remain and other organs such as the heart, liver, and kidneys may also reflect hypoxic damage.

Within the last 10 years, however, information has accummulated which suggests COHB levels below 10% may cause significant impairment. In investigating effects on the central nervous system, Schulte found that COHB levels estimated as between 2 and 3% could cause distinct alterations in ability to perform 7 psychological tests.[2] Beard and Wertheim found that low CO concentrations which would be expected to produce COHB levels near 2½% caused an impairment of temporal discrimination,[3] and McFarland[4] found changes in the visual threshold at COHB levels of 5%. Others employing different techniques have been unable to demonstrate psychological effects at these COHB levels.[5] Thus, while no gross symptoms occur below a level of 10% COHB and some psychological tasks may be performed without impairment, several very fine psychological functions show distinct decrease. Cardiopulmonary effects have also been reported at COHB levels between 5 and 10%, including a decrease in the arterial $PO_2$, an increase in the A-a gradient and a decrease in the mixed venous $PO_2$.[6] For these reasons, relatively low COHB concentration may have particularly adverse effects upon persons with heart or lung disease or those who have anemia.

With this physiological background, it is logical to evaluate the actually encountered CO levels in the environment and the levels of COHB which they produce. The key elements are the concentration of inspired CO and the duration of exposure. For low concentrations of CO the change in COHB level at equilibrium is CO in parts per million (PPM) × .16 = COHB %.[7] Thus exposure to 30 ppm of CO would produce an increase of 5% COHB within several hours. The most important source of CO in our environment is the incomplete combustion of gasoline in the automotive engine, resulting in an exhaust which contains approximately 3.5% CO.

In 1968 the CO production in the District of Columbia was estimated as 1.26 million tons per year of which 99% is believed to have come from automotive vehicles.[8] In an area such as Philadelphia, which has more industrial sources, 59%, a much smaller portion of the CO was produced by automobiles. Another important source of individual increase in COHB levels is cigarette smoking. The CO concentration in cigarette smoke is close to 2% and that in the inhaled smoke is 0.04% (400 ppm). The smoker who inhales and uses half a package of cigarettes or less daily averages 3.8% COHB, while the heavy smoker, using 2 or more packages per day, has an average level of 6.9% COHB.[9] Thus levels comparable to that acquired from heavy atmospheric CO pollution may be produced by smoking.

---

* Presented in part at Grand Rounds, Doctors Hospital, 1815 Eye Street, N. W., Washington, D. C., September 18, 1970.

† Supported in part by Grant RT-9 Social and Rehabilitation Service.

‡ Associate Clinical Professor of Medicine, George Washington University School of Medicine, 1331 H Street, N. W., Washington, D. C.; Member of Executive Board, Metropolitan Washington Coalition for Clean Air.

In view of the high concentration of CO in automobile exhaust, the safe use of automobiles is predicated upon the rapid dilution of automobile exhaust by air and the prevention of access by automobile exhaust to the passenger compartment. Indeed, automobile exhaust may be used for suicide or homocide, and if the engine is permitted to run in a tightly closed one-car garage the atmosphere becomes lethal within 5 minutes. The most important causes of accidental poisoning of the automobile occupants are defects in the exhaust system or breaks in the flooring. Minor defects may have a serious outcome if the engine is idling to permit heater use in a parked car, and under such circumstances fatalities have occurred in drive-in theatres or in trucks when the driver pulls off the road to nap. There are also occupational situations in which air is not readily available to dilute exhaust. Automotive repair shops and garages which do not have adequate ventilation have been implicated in CO poisoning.[10,11] At times features of automobile design have produced special dangers. An example of this is the placement of the air intake manifold near the front bumper so that when traffic is slow a high concentration of CO may be picked up directly from the tail pipe of the preceding car. This technicality has led to fatalities.

The air in heavily used open areas may have high concentrations of CO. For example, in the Los Angeles area 50% of winter days had values in excess of 30 ppm.[12] At off peak hours with normal traffic, freeway trips showed an average of 37 ppm, while in heavy traffic moving at less than 20 mph the average level rose to 54 ppm with peaks up to 120 ppm.[13] These significant levels of CO which occur in city streets and peak during the rush hour may result in high concentration of CO in the driver's compartment. For example, in a California study of driver compartments 8% had levels in excess of 50 ppm and 2% had levels in excess of 100 ppm.[14] In Washington, D. C. in 1967 the maximal 8-hour average value was 25 ppm on 1 occasion with values above 9 ppm occurring on 61 days.[15] These figures relate only to 8-hour averages. The ambient peak values in special areas of high automobile usage are not known and so cannot be compared with those described above.

Control of CO emission may be accomplished either by decreasing the number of automobiles or decreasing the amount of CO produced by each vehicle. It does not appear likely that the number of people going to downtown Washington will decrease greatly in the near future, but the advent of the Metro might decrease the number who use their cars for such purposes. While attempts have been made to increase the number of persons per vehicle and to utilize buses, such attempts have not been successful. The key program to reduce CO pollution is through decreasing its level in automotive emissions.

Though some emission controls have already been incorporated, federal standards for the future are much more stringent, and a 50% reduction in CO output is projected between the years 1969 and 1975. With the application of even tighter standards as already legislated, a further reduction of 65% is projected for 1985.[15] The latter figures indicate that in those localities where CO production is virtually exclusively the result of automotive vehicles the single act of compelling changes in vehicular design should cause major lowering of ambient levels.

Inspection is necessary to be sure that the performance is as good in the field as it is during test conditions, and the District of Columbia has already begun the trial monitoring of exhaust gases during automobile inspection. Vehicular inspection for emission control seems essential, but Maryland and Virginia do not have such a program. Lowering the general level of CO emission still does not guarantee that areas along heavily travelled automobile routes will have levels below the 9 ppm standard which has been selected. This, among other considerations, has led to vigorous opposition to building new freeways through residential neighborhoods by the Metropolitan Washington Coalition for Clean Air and other civic groups such as the Emergency Committee on the Transportation Crisis. The blackmailing requirement that freeways be built in order that Metro funds be released has further incensed residents of the Washington area, and lively political protest has ensued. Similarly, the construction of the Three Sisters Bridge and its approaches through Arlington has caused what first appeared to be extremist student reaction, but the young people have been joined by more traditionally oriented attorneys and civic associations, and the Three Sisters bridge has been, at least temporarily, delayed. Recent open hearings in Arlington have demonstrated that many citizens oppose the funneling of traffic from more distant Virginia suburbs to unload CO adjacent to their schools and homes while on its way into the District.

Furthermore, as part of the Air Quality Act of 1967, open hearings are required on criteria and implementation proposals. Generalists, allergists, and thoracic medical and surgical specialists have testified at such hearings, as have other health groups such as Tuberculosis and Respiratory Disease Associations, and this has contributed to an area-wide improvement in the standards finally adopted. In these ways, political confrontation has been used to focus attention upon the scientific aspects of air pollution. But we must not go beyond the valid scientific data for political purposes. For example, the fact that cholesterol-fed rabbits continuously exposed to CO sufficient to produce COHB levels of 15% had increased atherogenesis is of interest, but the assumption that this indicates that current CO exposure accounts for an observed increased rate of heart disease among non-white Baltimoreans falls into the category of unscientific speculation.[16] Unscientific speculation is detrimental to the environmentalist cause since its overstatements lead to disbelief in the scientifically valid harmful effects of atmospheric pollution.

In summary, CO is a significant air pollutant which impairs oxygen delivery to the tissues with harmful effects, particularly in the central nervous system. In the Washington area CO production which causes air pollution is almost exclusively automotive in origin and prospects for control are hopeful. Abatement of air pollution is intertwined with the sociopolitical problems of this area and physicians may contribute to the solution by providing public information and participating in community action.

The author is indebted to Miss Suzanne Earley and Dr. Angelina Guido for bibliographic assistance and to Miss Judy Shipe for secretarial services.

## References

1. DIPALMA, J. R., Editor: Drill's Pharmacology in Medicine, third edition. New York: McGraw Hill, 1965, p. 921.
2. SCHULTE, J. H.: Arch. Environ. Health, 1963, 7, 524.
3. BEARD, R. R. AND WERTHEIM, G. A.: Amer. J. public Health, 1967, 57, 2012.
4. MCFARLAND, R. A., ET AL: J. Aviat. Med., 1944, 15, 381.
5. STEWART, R. T., ET AL: Arch. Environ. Health, 1970, 21, 1352.
6. AYRES, S. M., ET AL: Arch. Environ. Health, 1969, 18, 699.
7. GOLDSMITH, J. R. AND LANDOW, S. A.: Science, 1968, 162, 154.
8. Air Quality Criteria for Carbon Monoxide. U. S. Department of Health, Education and Welfare, Public Health Service, National Air Pollution Control Administration, Washington, D. C., March, 1970.
9. GOLDSMITH, J. F., SCHUETTE, F. J. AND NOVIK, L.: Excerpta Med. Int. Cong. Series, 1963, 62, 948.
10. HENDERSON, Y. AND HAGGARD, H. W.: J. A. M. A., 1923, 81, 385.
11. RAMSEY, J. M.: Arch. Environ. Health, 1968, 15, 580.
12. ROBBINS, R. C., BORG, K. M., AND ROBINSON, E.: J. Air Pollut. Contr. Ass., 1968, 18, 106.
13. HAAGEN-SMIT, A. J.: Arch. Environ. Health, 1966, 12, 548.
14. GOLDSMITH, J. R., AND ROGERS, L. H.: Public Health Rep., 1959, 74, 551.
15. Proposed Addendum No. 1, Air Quality Standards for District of Columbia; Department of Human Resources, Government of the District of Columbia, November, 1970.
16. ASTRUP, P. K., KJELDSEN, K., AND WASNSTRUP, J.: N. Y. Acad. Sci., January 12-14, 1970.

# Establishment and Function of a Clinical Cancer Program in a Private Hospital

KARL C. JONAS, M.D.*

PRIOR TO JANUARY 1, 1968 patients with malignant disease at Doctors Hospital were handled statistically according to Public Law 83, which requires the reporting of "all patients where a diagnosis of cancer is made in the District of Columbia, regardless of residence." Supplementing this compliance was a Tumor Board which was held monthly, at which certain selected cases were discussed. With the development and definition of clinical cancer programs by the American College of Surgeons, the obvious advantages of this approach became apparent and a decision was made to develop a program which would merit approval by the American College of Surgeons. Our experience in the development and institution of this program is presented.

Burk[1] has written a very succinct description of a clinical cancer program in a community hospital in which he describes the 4 essential factors for a successful program as (1) budget and staff, (2) dedication, (3) organization, and (4) motivation. I agree with these concepts, but the commitment of budget and staff requires action by the governing board of the hospital and, in our opinion, this is where the program should start. A careful presentation with the development of the facts, figures, projections, and rewards should be prepared and presented to the governing board. The budgetary needs and the staff should be defined and a commitment made by the board if the program is to succeed. This was readily accomplished at our hospital and made the subsequent steps fairly simple. For guidance in the development of this program the "Manual for Cancer Programs" (published by the American College of Surgeons in 1966 and approved by the Commission on Cancer) (2) outlines the basic standards for an approved program. These requirements are essentially 5 in number:

1. Certification by the Joint Commission on Accreditation of Hospitals.
2. A hospital committee on cancer.
3. A cancer clinical program.
4. A cancer registry.
5. Report of survival and end-results.

## Cancer Committee

Since the Constitution and By-Laws of the Medical Staff of Doctors Hospital were in the process of being re-written in 1967, a Cancer Committee was defined in those by-laws and subsequently approved by the Attending Staff and the Board. (3) The definition of these responsibilities is important, and this section of the by-laws warrants inclusion in this article.

Subsection 5. Cancer Committee

The Cancer Committee of the Medical Staff shall be composed of representatives of the Departments of Pathology, Surgery, Radiology and Internal Medicine with additional representatives as desired. Departmental representatives shall be proposed by the Chairman of each Department and confirmed by the Executive Committee.

Appointments shall be made for a period of 1 year.

A Chairman of the Committee shall be appointed by the President of the Medical Staff in consultation with the Chairman of the Department of Surgery.

The Chairman of the Committee shall appoint a Secretary for the Committee.

A majority of the Committee membership shall constitute a quorum.

The Cancer Committee may meet at whatever interval the Chairman of the Committee deems desirable and necessary.

The Cancer Committee shall:

1. Provide leadership in the cancer activities program of the hospital and stimulate a spirit of unity of purpose and responsibility on the part of the staff in providing a high quality of cancer patient care.
2. Appoint a director of the cancer clinical program who, by reason of his special interest in clinical cancer, is qualified to fill this position.
3. Establish a Tumor Board which shall meet weekly at which meetings abstracts shall be presented and discussed of all patients with malignant disease. A copy of the Tumor Board recommendations shall be made available to the attending physicians with clear understanding that the ultimate responsibility remains with the attending physician.
4. Confer with the Administrator relative to matters concerning personnel, facilities, equipment, space, and other administrative matters.

---

* Chairman, Department of Surgery, Doctors Hospital, 1815 Eye Street, N. W., Washington, D. C.

5. Oversee the operation of the cancer registry, with particular attention directed to the follow-up program; the clinical research program; and the periodic reporting to the Staff of statistical information obtained from the cancer registry, including anatomic site, diagnostic procedures, treatment, survival and end-results.
6. Advise and assist in the solution of problems concerning the cancer program which may arise in the clinical or administrative departments of the hospital.
7. Maintain liaison with other staff committees of the hospital, the local and state branches of the American Cancer Society, the state medical society, community and state health agencies, and the Department of Professional Services and the Commission on Cancer of the American College of Surgeons through the Liaison Fellow of its Cancer Regionalization Program.
8. Prepare rules and regulations for the operation of the cancer program.

Definition and acceptance of this responsibility is absolutely essential to the successful development of a Program.[2]

## Tumor Board

We continued the use of the term Tumor Board since it was well established and had an identification in the minds of the Attending Staff. Burk thought that this term should be avoided, but institutional identification would seem to be the determinant. With the institution of a new Program, the meetings were changed from monthly to weekly and a new format was developed which has worked very well and has attracted favorable comment and a broad base of support from our staff. The essential features are a weekly meeting held on Tuesday at 12:30, at which an agenda is available containing abstracted material from the chart of each patient admitted the preceding week in whom a diagnosis of malignant disease was either made or suspected. These cases are gleaned from a daily review of the admitting diagnoses, daily review of the operating schedule, and daily review of the pathology specimens. This is supplemented by inquiry among the House Staff on both Medicine and Surgery to pick up their diagnostic problems which may represent malignant disease. X-ray films on all patients are available and presented by the radiologist. Preference is given to those patients of physicians who are in attendance and specifically to those in whom a Tumor Board opinion has been requested by the attending physician. The abstracts are presented by the House Staff who are charged with the responsibility of familiarizing themselves with these in advance. Tissue slides and organ scans are projected on a screen. All Clinical Cancer Committee members are expected to form the multidisciplinary nucleus of the Conference. A consensus is usually reached and made a part of the Tumor Board minutes, available to the attending physician but not made a part of the patient's record. This system has avoided intentionally the appearance of unwarranted interference by the Tumor Board in the patient's management. In practice, the relationship between the Tumor Board and the Attending Staff has been characterized by unbroken harmony.

The Tumor Registry's secretary serves as secretary to the Tumor Board and is of immeasurable aid in preparing the agenda and identifying the hospitalized patients for presentation.

## Tumor Registry

A Tumor Registry is a working index of cancer cases used to study the natural history of malignant neoplastic diseases in man. The data from a Tumor Registry should be used to prove that cancer is prevented, cured, or palliated by various therapeutic practices. The Registry, to have valid time-mortality data and to ensure that the cancer patient is re-examined at proper intervals, must have a link to the patient through the office of the physician and the hospital. The function of the Registry should be to scrutinize its data regularly to assure that it does not become the static repository of unused data, to assure that the efforts of the Registry lead to a better understanding of cancer as a disease, and to assure that these efforts continue to aid in the better care and treatment of cancer patients in the hospital. The policies covering the organization, administration, services and relationships of the Tumor Registry require approval by the Cancer Committee of the hospital, the Attending Medical Staff, and the Board of Directors of the hospital. The Tumor Registry is a section of the Department of Medical Records which organizationally relates directly to the Administrator. The Registry is staffed by a Tumor Registry Librarian, responsible to the Administrator for administrative purposes and to the Chairman of the Department of Surgery for professional purposes.

It is important to realize that the Tumor Registry can become a repository of unused data; if so, it is failing completely to fulfill its purpose. Not only must there be a periodic report of survival statistics and end-results, but the follow-up questionnaires to the physician's office should serve as a stimulus toward better and more complete follow-up examination with, hopefully, the earlier detection of new or recurrent disease and, in the long run, preservation of life. We are currently involved in plans to put our Tumor Registry data on the institutional computer so that we may, hopefully, be able to provide the physician with monthly print-outs on his patients who might be delinquent in their follow-up examinations. In addition, we would like to employ this print-out as a teaching tool in providing the Medical Staff with appropriate references of cumulative studies of specific organ-systems to assist them in evaluating their own end-results. Table 1 shows the number of new patients listed in our Tumor Registry in the first 3 years of its existence.

TABLE 1: New Patients Listed in Tumor Registry

| 1968 | 1969 | 1970 | Total |
|---|---|---|---|
| 751 | 674 | 609 | 2034 |

Table 2 shows a breakdown by organ-system of the patients registered. To date, only 1 patient out of a total of 2,034 has been lost to follow-up study. Of course, the value of survival figures and end-results increases with the age of the Tumor Registry.

## Summary

A Clinical Cancer Program, developed in accordance with the "Manual for Cancer Programs" published by the American College of Surgeons, was developed and put into operation in a private hospital as of January 1, 1968. Our experience with the program has been rewarding, and we feel that it has made a definite contribution to the quality of care rendered to the patient with malignant disease. Our follow-up figures are excellent, as they should be in an institution of this sort. A significant degree of unanimity has developed involving modes of therapy as a result of the free and open weekly discussions at Tumor Board sessions. The Tumor Board Conference is the best attended and most rewarding of all of our teaching conferences. We anticipate a new dimension in service to the medical community with the computerization of our Tumor Registry data and monthly print-outs to the Attending Medical Staff.

TABLE 2: Site of Origin

| | 1968 | 1969 |
|---|---|---|
| Tongue | 2 | 1 |
| Floor of mouth | 0 | 2 |
| Uvula | 2 | 1 |
| Tonsil | 0 | 1 |
| Pharynx | 8 | 3 |
| Neck | 1 | 2 |
| Larynx | 12 | 14 |
| Salivary Gland | 2 | 0 |
| Esophagus | 6 | 4 |
| Stomach | 11 | 17 |
| Colon | 67 | 57 |
| Rectum | 18 | 20 |
| Liver | 3 | 6 |
| Pancreas | 10 | 17 |
| Metastatic liver | 2 | 0 |
| Breast | 157 | 118 |
| Ovary | 17 | 15 |
| Vagina | 2 | 5 |
| Endometrium | 23 | 19 |
| Cervix | 19 | 14 |
| Testicle | 3 | 1 |
| Prostate | 41 | 38 |
| Kidney | 8 | 13 |
| Bladder | 29 | 22 |
| Lung | 48 | 61 |
| Melanoma | 8 | 9 |
| Lymphoma | 4 | 4 |
| Hodgkin's disease | 3 | 6 |
| Lymphosarcoma | 7 | 6 |
| Leukemia | 7 | 12 |
| Multi-myeloma | 4 | 3 |
| Polycythemia | 0 | 4 |
| Brain Tumor | 5 | 4 |
| Eye | 1 | 0 |
| Skin | 132 | 130 |
| Soft-part tumor | 8 | 6 |
| Unknown primary | 6 | 6 |

## References

1. Jul-Aug 1968 Bulletin of the American College of Surgeons, p. 151.
2. Manual for Cancer Programs; Amer. Coll. Surg. 1966.
3. Constitution and By-Laws, Rules and Regulations of the Medical and Dental Staff of Doctors Hospital, Inc., July 1969.

# Quantitation of the Atrioventricular Conduction Response Following Digoxin in Normal Subjects[*]

JAMES R. SNYDER, M.D.[†] LYNNE A. DAVIDSON[‡] AND JANVIER C. YOUNG[‡]

QUANTITATIVE MEASUREMENTS of the electrical activity of the atria following the use of digitals have been the subject of numerous studies, but the data are conflicting.[1-4] Although it has been a clinical observation that the P-R interval may increase, attempts to describe this response have not shown a useful or predictable change. The scalar morphology and time-course of atrial activation have also demonstrated no significant change.[1,3,4]

The present study has evaluated the atrial response of normal subjects following the use of digitalis by means of high-speed, simultaneous Frank-lead electrocardiographic recordings[5] which have been proven to be of value in quantitating changes occurring in the ventricular response.[6]

### Materials and Methods

Fifty healthy, ambulatory adults (table I) with no evidence of cardiovascular disease on history or physical examination and a normal electrocardiogram were studied at 0, 24, 48, 72, and 96 hours. Recordings were taken in the morning with the subjects fasting, supine, and resting. Smoking was prohibited.

Twenty subjects received digoxin 0.5 mg orally daily for 5 consecutive days, and 10 subjects received digoxin 2.5 mg orally on the first day and 0.5 mg orally daily for the remainder of a 4-day period. A control group consisted of 20 subjects who were studied for 5 consecutive days but who received no digoxin.

TABLE 1: Sex, Weight, and Age of Normal Subjects Receiving Daily Maintenance Digoxin

| Subjects | Dose | Sex | Weight | Age |
|---|---|---|---|---|
| 20 | 0* | 16M–4F | 156(118–224)† | 29(21–52)† |
| 20 | 0.5 mg | 9M–11F | 141(108–244) | 31(19–64) |
| 10 | 2.5 mg‡ | 10M | 168(130–244) | 29(21–52) |

* Control group.
† Mean (range).
‡ 2.5 mg digoxin initially followed by 0.5 mg daily.

All measurements were made on simultaneously recorded X, Y, and Z leads by the Frank lead system, which were taken at 50 and 100 mm per second paper speed. Sensitivity was maintained at 33 mm of deflection per mv of stimulus. Temporal measurements included the heart rate, P-R interval, P duration, P-R segment, and the time interval from the onset of the P deflection to P maximum. The maximal P deflection was measured in each of the 3 (X, Y, Z) leads, and the spatial magnitude of the maximal P vector was calculated as the square root of the sums of the squares of the maximal P deflection in each of the 3 orthogonal leads. Values were expressed as absolute change as well as percentage change from baseline. The baseline used was an average of each subject's total control days.

The P duration was measured from the earliest onset of P deflection in any lead to the last deflection in any lead. The onset of the P wave to the maximal P vector was measured from the earliest P deflection in any lead to the estimated point in the scalar record at which the spatial magnitude of the P vector became maximal. The P-R interval was measured from the earliest onset of the P deflection in any lead to the earliest QRS deflection in any lead. The P-R segment was computed as the algebraic difference between the P-R interval and the P duration. Time intervals were measured on tracings recorded at 100 mm per second paper speed.

All ECG measurements were made by us, and statistical analyses were carried out according to Snedecor.[7]

---

[*] From the Division of Cardiology, Doctors Hospital, 1815 Eye Street, N. W., Washington, D. C. Project 54 of Doctors Hospital Research Foundation and supported in part by the Washington Heart Association in 1967–68, 1968–69, and 1969–70.

[†] Director of the Coronary Care Unit at Doctors Hospital, and a Ph.D. Candidate in Physiology Biophysics at Georgetown University, 3900 Reservoir Road, N. W., Washington, D. C.

[‡] Work done during their tenure as scholarship students of the Washington Heart Association.

Address correspondence to Dr. James R. Snyder, Suite 815, 916-19th Street, N. W., Washington, D. C. 20006.

## Results

At 24 hours following the initial dose of digitalis there was a significant change in the heart rate which decreased 7 beats per minute in the group receiving 2.5 mg of digoxin and 4 beats in the group receiving 0.5 mg (table 2). In the subjects receiving 2.5 mg of digoxin there was a decrease in the spatial magnitude of the maximal P vector of 17% giving a highly significant change from control values ($p < 0.005$). This change in the heart rate and maximal P vector decreased in the tracings taken over the subsequent days.

A change in the P duration was observed following 2.5 mg of digoxin which reached significance ($p < 0.05$) at 96 hours. No other statistically significant change was noted in the P duration.

The P-R segment demonstrated the most significant change following digoxin. By 72 hours of digoxin administration the P-R segment had increased 10%, and the change was statistically significant at 72 and 96 hours ($p < 0.05$). These findings were also reflected in the P-R interval measurement at 72 and 96 hours ($p < 0.05$).

There was no change in the P onset to the maximal P vector.

No evidence of toxicity was observed in these normal subjects receiving digitalis.

## Discussion

Geiger et al[4] observed that a change in the P-R duration could not serve as a quantitative measure of digitalization, even when moderately excessive doses of the drug had been administered. He had noted in his group of 10 normal subjects that only 5 demonstrated any significant change in the P-R interval. Larsen et al[3] noted no significant change in the P wave following administration of digitalis to 15 normal individuals, and only 4 demonstrated a prolongation of the P-R interval. White and Sadler,[1] however, noted in a study of 5 normal subjects that 4 had an increased P-R interval following digitalis. Our data show that the changes following digitalis in normal subjects are best expressed by the P-R interval.

The conduction delay responsible for the P-R prolongation is in the junctional tissue or N region of the AV node,[8] and Damato et al,[9] using intracardiac electrodes, showed the conduction delay to be a prolongation of the P-His time.

It was observed that no significant change occurred in the duration of the P wave except in the 2.5 mg group at 96 hours, and no change occurred in the time interval from the onset of the P wave to maximal P time. This suggests that the conduction velocity across the atria following digitalis was not

TABLE 2: The Response Following Daily Maintenance in Normal Subjects

Expressed as Change from Baseline

| | Subjects | Dose | Baseline | 24 | 48 | 72 | 96 Hours |
|---|---|---|---|---|---|---|---|
| Heart Rate | 20 | 0* | 68 | +3(1.3)‡ | +1(0.8) | −1(0.8) | −1(0.8) |
| (beats/min) | 20 | 0.5 mg | 68 | −4(1.6)§ | −2(1.7) | −5(1.5) | −4(1.6) |
| | 10 | 2.5 mg† | 68 | −7(1.3)§ | −4(1.4) | −5(2.8) | −3(2.4) |
| Spatial Mag. | 20 | 0 | 0.14 mv | +5(3.4) | −1(2.5) | −4(3.3) | +1(3.1) |
| Max. P | 19 | 0.5 mg | 0.15 mv | −1(4.0) | +1(4.4) | 0(4.7) | 0(4.6) |
| Vector (%) | 9 | 2.5 mg | 0.14 mv | −17(3.9)§ | −1(6.6) | −4(8.0) | −7(6.1) |
| P Duration | 20 | 0 | 98 msec | 0(1.3) | 0(1.0) | 0(1.1) | 0(0.9) |
| (%) | 20 | 0.5 mg | 93 msec | +1(1.4) | −1)1.4) | −2(1.5) | 0(1.1) |
| | 10 | 2.5 mg | 100 msec | +1(2.5) | +2(2.7) | +2(2.4) | +4(2.3)¶ |
| P-R Interval | 20 | 0 | 145 msec | +1(1.4) | 0(1.1) | −1(9.9) | −1(1.1) |
| (%) | 20 | 0.5 mg | 150 msec | +3(1.3) | +2(0.9) | +2(0.9)¶ | +5(1.4)¶ § |
| | 10 | 2.5 mg | 148 msec | +4(2.2) | +3(2.1) | +4(2.4)¶ | +5(2.4)¶ |
| P-R Segment | 20 | 0 | 47 msec | +3(3.0) | +2(2.4) | −3(2.3) | −2(2.4) |
| (%) | 20 | 0.5 mg | 58 msec | +8(4.6) | +8(3.2) | +10(2.8) | +13(4.8)¶ |
| | 10 | 2.5 mg | 47 msec | +11(6.3) | +5(4.1) | +10(6.0)¶ | +8(5.1)¶ |
| Onset to | 20 | 0 | 55 msec | −2(3.2) | −1(2.0) | −2(1.7) | 0(2.2) |
| Max. P (%) | 20 | 0.5 mg | 53 msec | +2(2.4) | +3(2.8) | −4(2.1) | +4(3.1) |
| | 10 | 2.5 mg | 55 msec | +8(4.4) | +1(4.7) | +2(5.1) | −1(2.5) |

* Control group.

† 2.5 mg initially followed by 0.5 mg daily.

‡ Standard error of the mean.

¶ = $p \leqslant 0.05$.

§ = $p \leqslant 0.005$.

altered to the point of reflecting an observable change in the time-course of atrial depolarization, which is consistent with the work of Rouse[10] who reported that ouabain does not appear to alter atrial conduction velocity.

It was noted that a diminution of the spatial magnitude of the maximal P vector showed a significant change 24 hours following 2.5 mg of digoxin orally. Routier and Puddu[11] had earlier noted changes in the morophology of the P wave and a diminution in its amplitude. This was observed in 4 of their 12 normal subjects but had not been an observation of other investigators.[1-4] The explanation for this diminution in the amplitude of the P wave is not readily apparent. However, since no other observable change occurred in the time-course of atrial depolarization, it suggests that the total activation potential developed in the atria during depolarization decreased following this dose of digitalis. It is not disturbing that a similar result was not noted in the ECG measurements of the ventricular activation.[6] The different pathway of depolarization, the cancellation, and the endocardial to epicardial orientation of ventricular depolarization are different from that in the atria, and therefore the response following digitalis might also be anticipated to be different. The diminution of the amplitude of the T wave in normal subjects was associated with a change in the time-course of ventricular repolarization unlike the present findings in the P wave. It was also interesting that the decrease in P amplitude occurred 24 hours after 2.5 mg of digoxin, while the significant P-R interval response occurred after 72 hours of daily digoxin.

In summary, the changes in the electrical activity of the atria following the administration of digitalis in normal subjects appear to have their most significant expression as a prolongation of the P-R segment. The N region of the atrioventricular node is the site of this conduction delay.

## References

1. WHITE, P., AND SATTLER, R.: J. Exp. Med., 1916, 23, 613.
2. STEWART, H., AND COHN, A.: J. Clin. Invest., 1932, 11, 917.
3. LARSEN, K., NEUKIRCH, F., AND NIELSEN, N.: Am. Heart J., 1937, 13, 163.
4. GEIGER, A. BLANEY, L., AND DRUCKEMILLER, W.: Amer. Heart J., 1941, 22, 230.
5. FRANK, E.: Circulation, 1956, 13, 737.
6. SNYDER, J., AND PIPBERGER, H.: Amer. Heart J., 1967, 73, 640.
7. SNEDECOR, G., AND COCHRAN, W.: Statistical Methods, 6th edition. Ames, Iowa, Iowa State University, 1967, p. 103.
8. WATANABE, Y., AND DREIFUS, L.: Amer. J. Physiol., 1966, 211, 1461.
9. DAMATO, A. ET AL: Circulation, 1969, 39, 287.
10. ROUSE, W.: Amer. J. Cardiol., 1966, 18, 406.
11. ROUTIER, D., AND PUDDU, V.: Arch. d. mal. du coeur, 1935, 29, 800.

# The Clinical Significance of the Atrial T-Wave*

JUAN B. CALATAYUD, M.D.† AND HAROLD M. SILVER, M.D.‡

THE PURPOSE OF THIS communication is to draw attention to a little used portion of the electrocardiogram, atrial repolarization, and the alterations which occur in it as a result of disease processes. Atrial repolarization occurs immediately after the P-wave and is designated Ta-wave (Ta). First recognized by Hering[1] in 1912, it is normally a low-amplitude, low-frequency deflection opposite in direction to the preceding P wave. When cardiac rate and rhythm are normal more than half of the Ta occurs simultaneously with the ventricular complex so the Ta can be seen in its entirety only in complete heart block, auriculoventricular conduction disturbances, or atrial extrasystoles not immediately followed by the ventricular complex; therefore, analysis of the Ta is usually limited to its first portion, the PR segment.

## Ta Components

*Duration.* The conventional Ta has 2 components: 1. STa segment or the segment between the end of the P-wave and the beginning of the true Ta. This is inscribed during the PR segment and part of the QRS complex. It is comparable to the ventricular ST segment. 2. The true Ta follows the STa segment and is inscribed simultaneously with the terminal portion of the ventricular QRS complex and the ST segment. Electrical atrial systole is the addition of all electrical atrial phenomena (P-wave + STa + Ta), is designated P-Ta, and corresponds to the Q-T interval of the ventricular complex. The various durations are shown in figure 1.

Assuming a value for the electrical atrial systole of 0.36 sec. with a heart rate of 80/min. and a PR segment of 0.16 sec., atrial and ventricular activity are superimposed for about 0.20 sec.[2]

*Ta amplitude and axis.* The amplitude of the Ta is the distance between the upper levels of the T-P segment and S-Ta segment.[3] In the normal subject the maximum Ta is usually found in lead 2. Only 1–2% of normals have Ta values in excess of 0.5 mm.[4] Due to the low amplitude of the Ta, a small error in measurement may be misleading, and thus a good quality tracing, careful selection of the best cardiac complex, and accurate measurement are critical.

The 2 most important factors governing the magnitude of the Ta in the normal ECG are the heart rate and the area of the preceding P-wave. With cardiac rates below 70 beats per minute the Ta is usually not visible, but when above 90 per minute the Ta is almost always present.[3] Since in most normal instances the Ta is so small as to be barely measurable, a prominent Ta should suggest the presence of an atrial abnormality.

The Ta vector is opposite of the P-wave vector and is therefore directed to the right, upward, and posteriorly. As the P-wave shifts from its normal +60° location, the maximum Ta will be found in leads aVF (rightward shift) or lead I (leftward shift). Thus, while for maximal accuracy Ta might be measured in all of the frontal plane leads, if a single lead is to be utilized it should be that to which the mean Ta axis (also P axis) is parallel. P-wave and Ta-wave areas are equal but of opposite polarity, hence their vectorial addition or atrial gradient is equal to zero. This is a

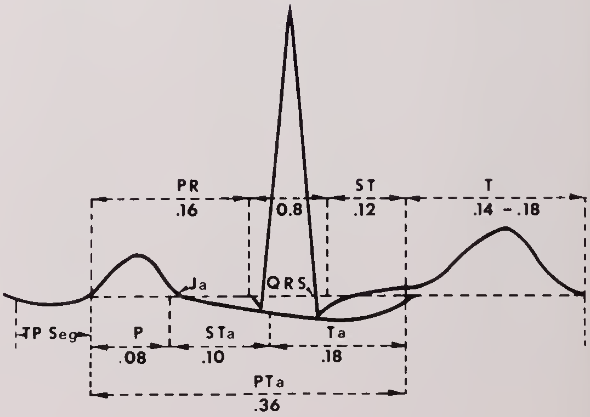


FIG. 1. Duration of Ta components and their time relationship with other ECG parameters. Adapted from Tranchesi, et al.[2]

---

* Supported in part by Grant RT-9, Social and Rehabilitation Service, and by the Captain David Risher and Julian Ray Memorial Funds.

† Associate Director of Medical Education, Doctors Hospital, 1815 Eye Street, N. W., Washington, D. C.

‡ Associate Clinical Professor of Medicine, the George Washington University School of Medicine, 1331 H Street, N. W., Washington, D. C., and Courtesy Staff, Department of Medicine, Doctors Hospital, Washington, D. C.

basic physiological difference from ventricular phenomena in which the QRS complex and T-wave are of the same polarity. According to Tranchesi,[2] the thinness of the atrial wall permits a thermal and tensional equilibrium between the epicardial and subendocardial surfaces which results in the same sequence for atrial depolarization and repolarization.

## Ta in Disease

*Chronic obstructive pulmonary disease (COPD).* Zuckerman and co-workers[5] in 1947 studied the Ta in patients with chronic cor pulmonale and found a median value of 0.5 mm, double the level found in normals. Gross[3], in a pilot study of patients with pulmonary disease, found the Ta to be significantly greater than in normals with the same cardiac rate. Wasserburger et al[6] studied the Ta in patients with pulmonary emphysema and found that a Ta-wave of 0.75 mm or greater, associated with vertical cardiac position and a cardiac rate of 100 per minute or less was highly suggestive of advanced pulmonary emphysema. Their criteria for "advanced pulmonary emphysema" included maximum voluntary ventilation (MVV) less than 70% of predicted; this is much less stringent than we employ.

In a group of 171 patients with COPD[7] we found that those with the greatest impairment in pulmonary function exhibited the highest Ta values (table I). As the P axis shifted to the right, the Ta amplitude increased and the site of maximum P and Ta amplitudes was lead aVF. Ta amplitude correlated well with the heart rate, P-wave amplitude, and Paxis but no correlation was found with the PR interval or P-wave duration.

In the same study, when patients were divided into quartiles on the basis of the MVV (table 2), the number of patients with Ta of 0.10 mv or more in quartile IV (the most severe COPD) was almost double that in quartiles II and III, and about 7 times that in quartile I. The highest percentage of Ta-waves of 0.06 mv or more was also found in quartile IV, but discrimination between quartiles was not as good as at the 0.10 mv level. Figure 2 demonstrates the prominent Ta-wave encountered in a patient with advanced COPD.

In a study of patients with pulmonary heart disease confirmed at autopsy Burch and DePasquale[8] found a higher incidence of Ta-waves in patients with emphysema than in normals. In patients on whom serial ECGs were available they observed progression of Ta-wave amplitude as the pulmonary disease worsened. Our findings are consistent with this.

The mechanism by which COPD alters atrial repolarization has not yet been elucidated. The factors which have been suggested include atrial dilatation,[5] hypertrophy,[9] injury,[10,11] and increased sympathetic tone.[12]

*Atrial injury.* Disorders other than lung disease or pulmonary hypertension may alter atrial repolarization. Atrial infarction has been shown to

**TABLE 2: Percent of ECG Abnormalities in the Four Quartiles Ranked According to MVV L/MIN.**

| Quartiles | n | Maximum Voluntary Ventilation Mean | ±SD | Ta AMP. of 0.06 MV or More % | Ta AMP. of 0.10 MV or More % |
|---|---|---|---|---|---|
| I | 36 | 109.9 | 25.0 | 30.6 | 5.6 |
| II | 37 | 63.1 | 8.6 | 45.9 | 18.9 |
| III | 35 | 44.9 | 5.1 | 48.6 | 20.0 |
| IV | 41 | 27.9 | 5.8 | 51.2 | 36.6 |
| Total | 149* | | | | |

* 20 cases with left axis deviation of the mean QRS and 2 with left axis deviation of the mean P wave axis not included.

**TABLE 1: Relationship of Ta Groups to ECG Parameters And Lung Function Tests**

| Ta Amplitude in MV | 0.00–.05 n = 98 Mean | SD | 0.06–.09 n = 38 Mean | SD | 0.10 or More n = 35 Mean | SD | F. | p |
|---|---|---|---|---|---|---|---|---|
| Heart rate (min) | 83.500 ± | 17.590 | 85.500 ± | 15.310 | 95.140 ± | 17.820 | 6.23 | 0.002* |
| PR interval (sec) | 0.158 ± | 0.025 | 0.162 ± | 0.018 | 0.152 ± | 0.021 | 1.53 | 0.221 |
| P amplitude (mv) | 0.205 ± | 0.062 | 0.254 ± | 0.056 | 0.261 ± | 0.010 | 10.83 | 0.000* |
| P duration (sec) | 0.089 ± | 0.016 | 0.092 ± | 0.012 | 0.090 ± | 0.012 | 0.85 | 0.431 |
| P axis (degrees)† | 67.150 ± | 19.790 | 70.870 ± | 16.370 | 77.490 ± | 11.950 | 4.42 | 0.014* |
| MVV (L/min) | 64.570 ± | 32.680 | 67.200 ± | 39.750 | 47.150 ± | 26.390 | 4.23 | 0.016* |
| VC (ml) | 3284.330 ± | 1084.570 | 3412.860 ± | 1131.860 | 2816.050 ± | 849.910 | 3.40 | 0.036* |
| FEV$_1$ (ml) | 1659.350 ± | 822.890 | 1695.890 ± | 962.770 | 1183.590 ± | 607.850 | 4.93 | 0.008* |

* Statistically significant.

† Two cases with left axis deviation of the mean P-wave axis have been excluded.

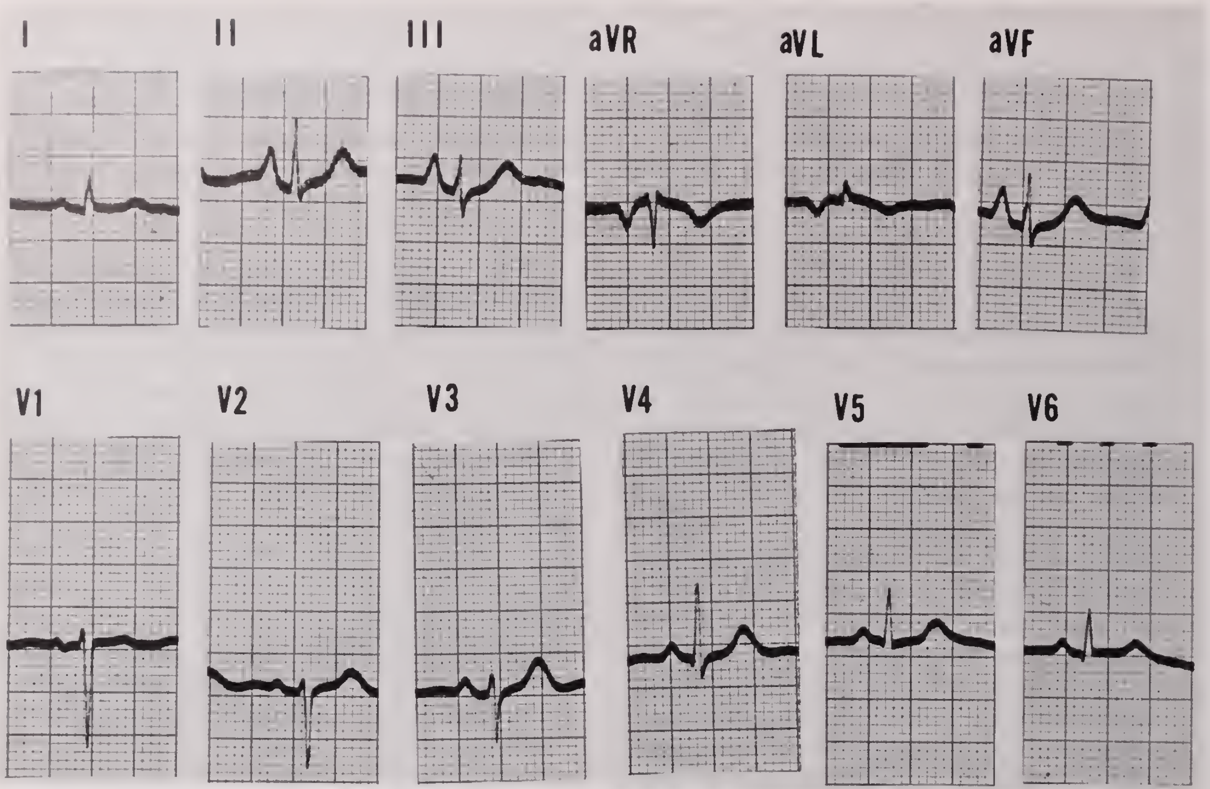


FIG. 2. COPD produced the prominent Ta present in leads II, III, and aVF. Patient's MVV was 33 liters per minute, less than half of predicted.

produce abnormal Ta waves[13,14] with the direction of the Ta dependent upon the location of the infarct. Cauterization of the left atrium elevated the Ta segment in lead I while cauterization of the right depressed it.[10,15] The incidence of atrial infarction either isolated or in combination with ventricular infarction is not well known, because postmortem examination of the atrial walls is not routinely performed. Tranchesi[2] has reported "atrial current of injury" in a patient with myocardial infarction. The atrial changes disappeared 20 days later while the ventricular infarction was still in evolution. We have observed the same phenomenon in some of our patients.

Atrial current of injury may be evanescent (figure 3). For example, while performing right-heart catheterization, contact of the catheter tip with the atrial wall causes a current of injury characterized by elevation of the Ta (PR segment). As the catheter is withdrawn and the contact with the atrial wall is terminated the Ta returns to normal. Awareness of this current of injury helps avoid perforation of the atrial wall.[16]

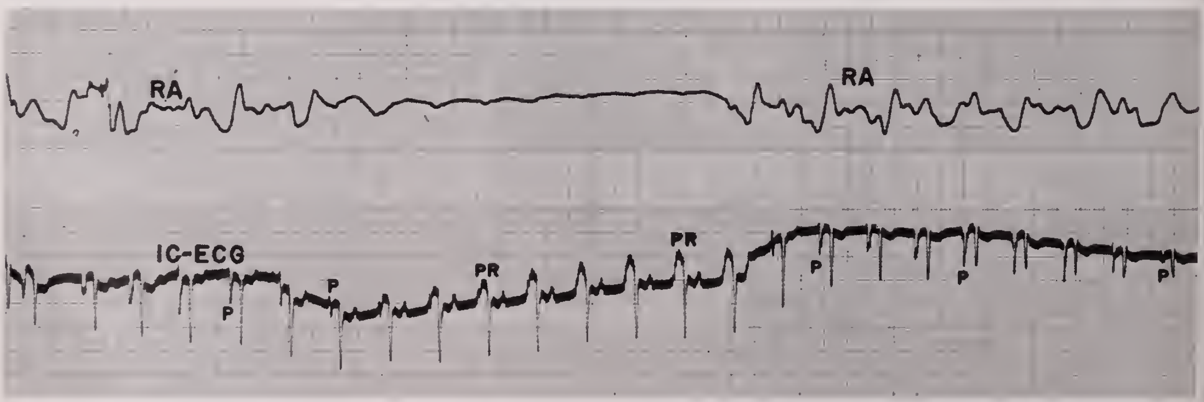


FIG. 3. Right intra-atrial pressure (RA) and electrocardiogram (IC-ECG) of dog simultaneously recorded. As long as pressure curve is damped due to pressure of catheter tip against atrial wall, there is an elevated PR segment or Ta.

Atrial repolarization must also be considered in the early diagnosis of pericarditis.[2] The pericardial process tends to elevate the ST segment. However, co-existent tachycardia will depress the Ta and result in the summation effect of restoring the ST segment toward isoelectric. Thus, in a patient suspected of pericarditis who has tachycardia, a clearly depressed Ta associated with minimally elevated or isoelectric ST segment may be consistent with pericarditis. The same combination may occur when pericarditis develops in a patient with COPD.

***Acquired heart disease.*** The Ta-wave may be prominent in mitral stenosis,[3,17] but correlation between Ta amplitude and degree of mitral stenosis as determined by hemodynamic studies has not been reported. Other authors[18] have described abnormal depression of the Ta in arterial hypertension. They attributed this to arteriosclerosis of the auricular arteries, causing insufficient blood supply.

***Effects on Exercise ECG.*** Some ST abnormalities which occur during or after exercise may be due to the altered atrial depolarization which extends into the ventricular ST-segment. The different factors responsible for Ta abnormalities should be considered when interpreting an exercise ECG with an abnormal ST-segment prior to making a definite diagnosis of coronary artery disease. For example, a patient with COPD may have a prominent Ta-wave producing a downward displacement of the ST-segment simulating the effect of coronary artery disease. This is accentuated by the Ta augmentation of tachycardia.

## Summary

The P-wave in the ECG is followed by the atrial repolarization or Ta-wave, normally a low-amplitude, low-frequency deflection, opposite in direction to the preceding P-wave. The Ta is seen in its entirety only in complete heart block, auriculoventricular conduction disturbances, or in atrial extrasystoles not immediately followed by the ventricular complex.

Alteration of the Ta in chronic obstructive pulmonary disease has clinical utility now. It has also been reported in atrial infarction, mitral stenosis, and arterial hypertension. Part of the Ta-wave is inscribed simultaneously with the ST-segment and this may influence the findings in pericarditis, exercise ECG, and coronary artery disease.

A careful analysis of the Ta in the routine clinical interpretation of the ECG may result in a better understanding of the ECG manifestations of cardiac and pulmonary pathology.

Acknowledgement: Miss Suzanne Earley contributed invaluable technical assistance. Miss Doreen Justus provided untiring secretarial services.

## References

1. HERING, H. E.: Pfluger Arch. Ges. Physiol., 1912, 144, 1.
2. TRANCHESI, J., ADELARDI, V., and DE OLIVEIRA, J. M.: Circulation, 1960, 22, 635.
3. GROSS, D.: Amer. Heart J., 1955, 50, 24.
4. STEWART, C., and MANNING, G.: Amer. Heart J., 1944, 27, 502.
5. ZUCKERMAN, R., ET AL: Amer. Heart J., 1948, 35, 421.
6. WASSERBURGER, R. H. ET AL: Amer. Heart J., 1957, 54, 875.
7. CALATAYUD, J. B., ET AL: Dis. Chest, 1969, 56, 5.
8. BURCH, G. E., and DE PASQUALE, N. P.: Amer. J. Cardiol., 1963, 11, 622.
9. MYERS, G. B.: The Interpretation of the Unipolar Electrocardiogram. St. Louis: Mosby Company, 1956.
10. ABRAMSON, D. I., FENICHEL, N. M., and SHOCKOFF, C.: Amer. Heart J., 1938, 15, 471.
11. JARUSZEWSKI, E. and HELLERSTEIN, H., and FEIL, H.: Circulation, 1953, 7, 175.
12. LEPESCHKIN, E.: Modern electrocardiography. Baltimore: Williams & Wilkins Company, 1951.
13. MILLER, R., and PERELMAN, J. S.: Amer. Heart J., 1946, 31, 501.
14. HELLERSTEIN, H. K.: Amer. Heart J., 1948, 36, 422.
15. SODI-POLLARES, D., DOBERON, J., CABRERA, E., and La CRUZ, M. V.: Arq. Brasil. Cardiol., 1948, 1, 113.
16. CALATAYUD, J. B., GORMAN, P. A., and CACERES, C. A.: Electronic monitoring of physiological phenomena in experimental animals. Methods of Animal Experimentation, W. I. Gay. Editor. New York: Academic Press, 1965, Volume II, p. 527.
17. FEIL, H.: J. Mount Sinai Hosp., N. Y., 1942, 8, 502.
18. HAHN, L., and LANGENDORF, R.: Acta. Med. Scand., 1939, 100, 279.

**We located our offices just off Farragut Square to better serve the professional* and personal insurance needs of doctors.**

Employees Workmen's Compensation • Bonds on Employees • Equipment Floater • Fire Insurance Contents • Business Expense Disability • Non-Cancellable Disability Income • Auto and Home Insurance

**As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*

**MAXWELL**
**AND**
**TENNYSON**
**INC.**
*PHARMACISTS*

*"Where Pharmacy is a Profession"*

M+T

Washington, D. C.

1801 Eye Street NAtional 8-0206
1835 Eye Street STerling 3-0360
916-19th Street, N.W. 223-9797

*Prescriptions called for and delivered without extra charge*

Biologicals–Vaccines

Serums

Hypo-Allergenic Cosmetics

*KALORAMA CONVALESCENT HOME, INC.*

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE

for the medical management of the acute stages of alcoholism.

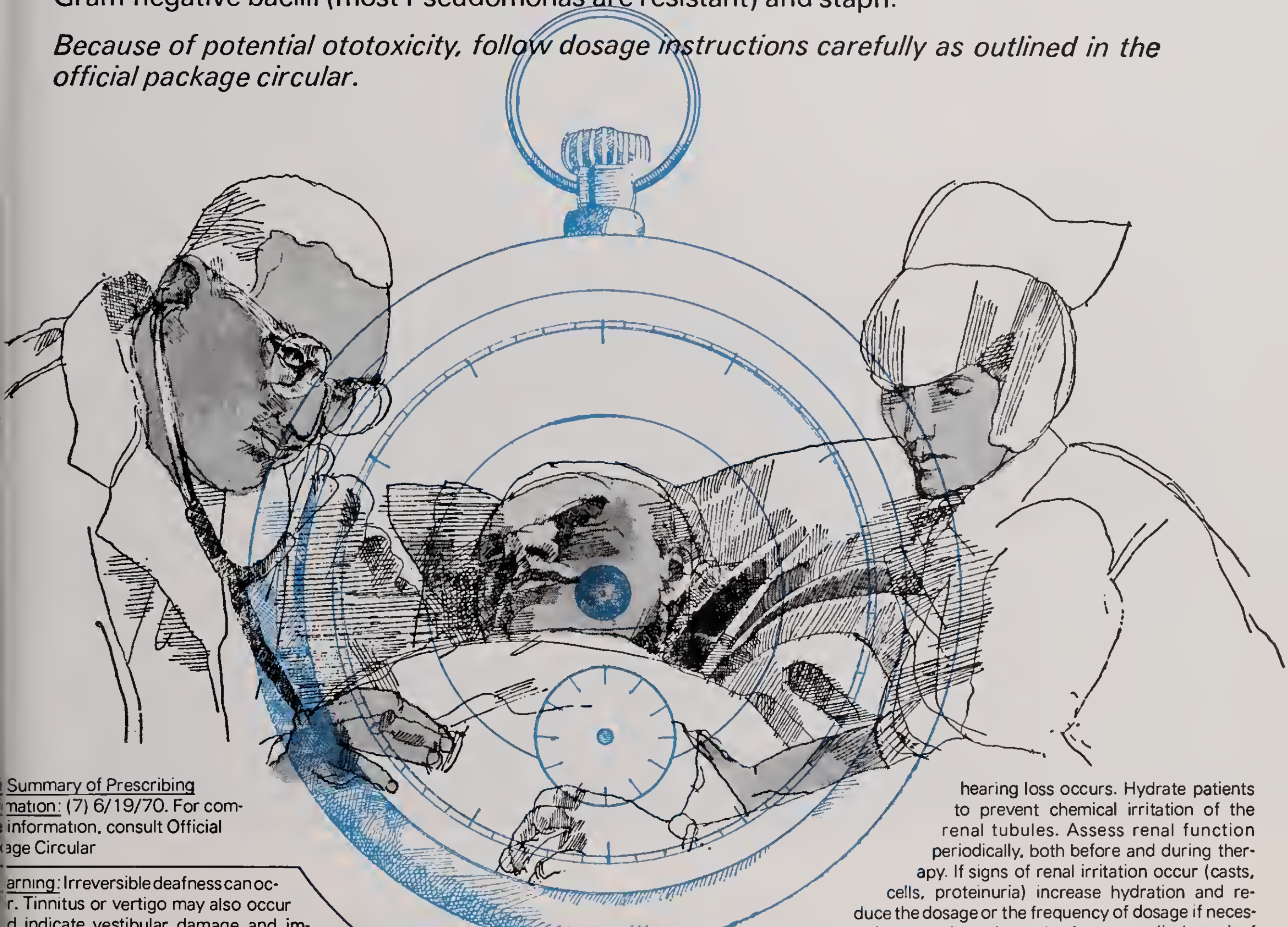
**2001 KALORAMA ROAD**
**at 20th Street, N.W.** **Adams 2-0063**

# A valuable hospital antibiotic —when there is no time

**in severe systemic infections**—postoperative bacteremia, Gram-negative/staph pneumonias or neonatal sepsis—Kantrex® (kanamycin sulfate) is often indicated before results of customary sensitivity tests can be reported. Clinical response is often seen within 24-48 hours in susceptible infections, with remission soon after.

**10 years of experience** confirm the continuing effectiveness of Kantrex® against many Gram-negative bacilli (most Pseudomonas are resistant) and staph.

*Because of potential ototoxicity, follow dosage instructions carefully as outlined in the official package circular.*



Summary of Prescribing
mation: (7) 6/19/70. For com-
information, consult Official
age Circular

arning: Irreversible deafness can oc-
r. Tinnitus or vertigo may also occur
d indicate vestibular damage and im-
nding deafness. The risk is sharply increased
th renal dysfunction. In such cases, decrease size
d frequency of doses. Discontinue kanamycin and
eck hearing if azotemia increases. Watch carefully for oto-
icity in older patients and patients receiving more than 15 Gm. of kana-
cin. To avoid neuromuscular paralysis with respiratory depression, post-
ne intraperitoneal instillation in post-operative patients until recovery
m anesthesia and muscle relaxants is complete. Avoid concurrent use of
er ototoxic drugs including ethacrynic acid. Safety in pregnancy is not
ablished.

tions: Serious infections due to susceptible strains of *E. coli*, Proteus sp.,
ogenes, *K. pneumoniae*, *Serratia marcescens* and *Mima-Herellea*. Culture
ensitivity studies should be performed.
aindications: A history of hypersensitivity to the drug. Prior auditory damage
namycin or other agents may be a contraindication if effective alternative
y is available.
utions: Obtain audiograms before and during therapy in patients with renal
nction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or

hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary-in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

Supplied: Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. and 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml.

A.H.F.S. Category 8:12.28

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company, Syracuse, New York 13201

# KANTREX® INJECTION
## (kanamycin sulfate)

# President's Page

## LOCAL MEDICAL LEGISLATION AND WHERE WE STAND

One of the most frequent questions asked of officers of the Medical Society pertains to the status of local medical legislation. There is considerable interest in the status of the D. C. Incorporation Act, the Medical Records Act, the Amendment to the Healing Arts Practice Act (regarding licensure), and legislation regarding blood transfusions, to name a few currently under scrutiny by your Society.

The Legislative Committee, under the able guidance of Doctor Herbert Giffin in 1970 and Doctor Paula Kaiser in 1971, has investigated these various legislative proposals. The Medical Society of the District of Columbia has been asked to lend its support to these proposals in hopes of getting them through Congress in the form of new legislation.

Although we are professionals in the scientific sense of the word, we are "babes in the woods" as politicians. Members of our legislative committee are knowledgeable, interested and concerned, but they are no match for professional lobbiests and experienced politicians once a bill has been introduced. As a matter of fact, this has been a most frustrating kind of experience. Some of these bills were introduced in the last Congress but died when Congress adjourned. Some have been re-introduced in the 1971 Congress with hopes for faring better. In one instance the bill to amend the Healing Arts Practice Act has been in the works for nearly five years, without any noticeable progress.

Members of your Society have been in constant contact with both the field representative of the AMA as well as the local AMA Office for Congressional Affairs here in Washington. We have been advised by the director of the local office that they will afford our Society all of the basic guidance and support that they can give to us but that the actual responsibility for lobbying and following a bill through to its passage must still reside with us at the local level.

This matter has concerned our new legal counsel, Mr. John Lewis Smith, and members of our executive board. After thorough discussion it has been recommended that the local society hire its own lobbyist to represent us on local issues affecting medical practice in the District of Columbia. This would give us a direct line of responsibility from the Hill to our membership in hopes of obtaining favorable action on these items of legislation. I think we have finally come to grips with reality in this instance, recognizing our limitations as physicians and the value of a representative for us in congressional circles.

At the present time the Professional Incorporation Act has been introduced in the House. The Amendment to the Healing Arts Practice Act and the Medical Records Act for the District of Columbia have yet to be introduced, although this is anticipated shortly. Legislation regarding blood transfusions is currently in the bill-writing stage, and hopefully progress will be made despite some formidable opposition.

We are enlisting support from our fellow societies to inform their Representatives and Senators of our needs here in the District of Columbia. We need all the help we can muster from our members and our friends.

Marvin C Korengold

# Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

**Appeal** With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

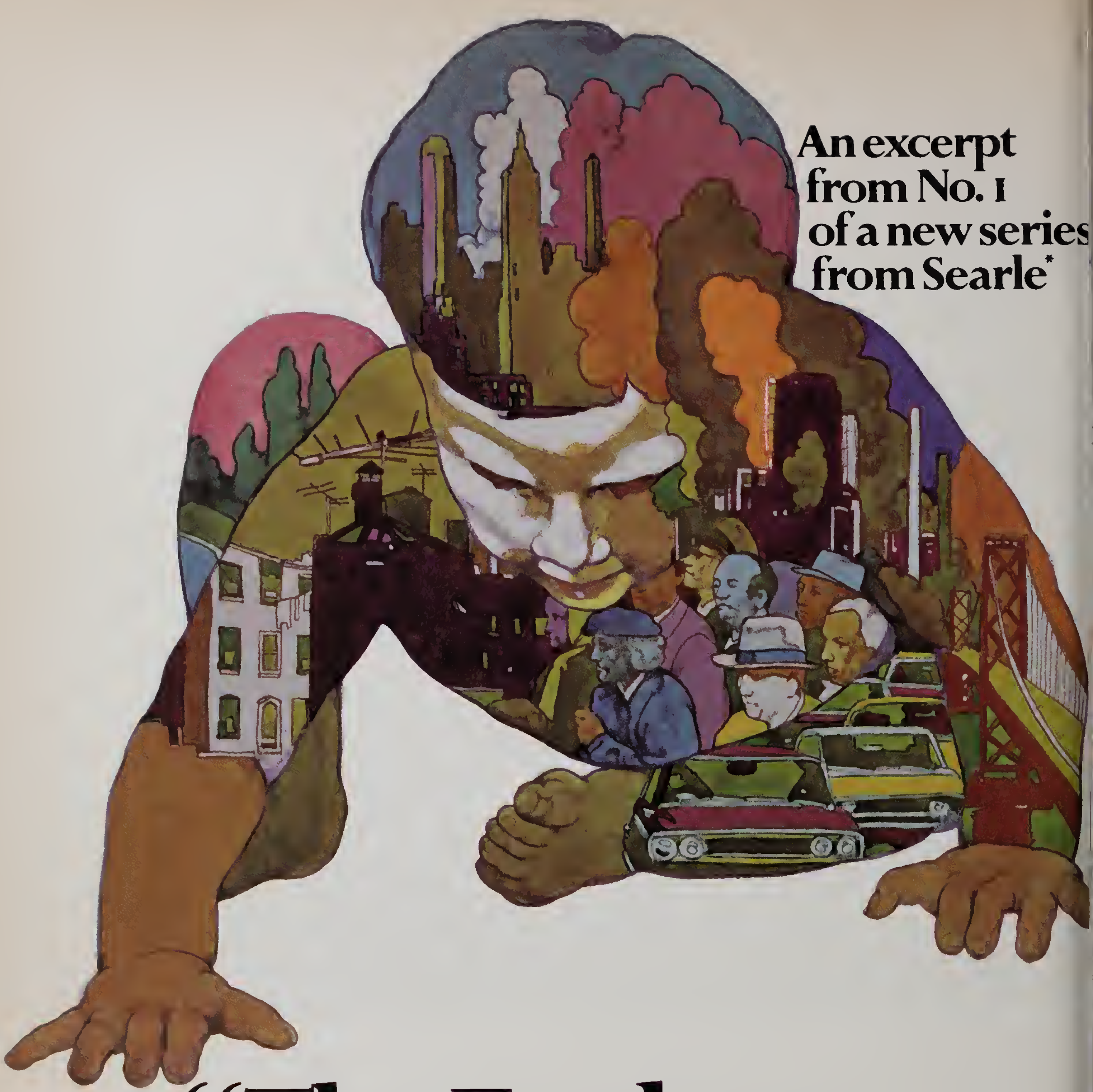
Campbell's
CONDENSED
SOUP

**Nourishment** Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

**Convenience** Within 4 minutes a bowl of delicious soup is heated and ready to eat.

**Economy** Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*



An excerpt
from No. 1
of a new series
from Searle*

# "The Ecology of Birth Control"

### 75 million more Americans—what impact on health care?

Because of a declining birthrate in the United States—attributable in no small measure to the widespread use of contraceptives—our population in thirty years is expected to be *only* 280 million, while the world population is expected to double, reaching 7 billion.

But the word "only" has an ironic ring to ecologists who warn of cities resembling overcrowded, contaminated rat colonies, of respiratory and mental diseases reaching epidemic proportions and of a health-care community virtually overwhelmed by the burden.

The global consequences may be no less devastating. Ecologists estimate that every American has roughly fifty times the negative impact on the Earth's life-support systems of, say, a citizen of India. In these terms, adding 75 million Americans would be equivalent to adding 3.7 billion Indians to the world population.

**For the complete brochure, a*
*others in the series as they appe*
*please write to Searle or ask your Sea*
*representative.* Explored in the for
coming issues will be the role of bi
control on family pressures and
effects on the family; the influences
poverty, ethnic factors and mari
status; its role in illness, its gene
implications and its effects on
emotional and behavioral life of
individual.

**An original contribution to the science of contraception**

# Dem/ulen®

Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

Demulen...for low estrogen and Searle's progestin...with its unsurpassed contraceptive effectiveness and low incidence of side effects...with simple "Sunday-starting" and patient-proof Compack® tablet dispenser.

**Actions**—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FHS) and the luteinizing hormone (LH).

**Special note:** Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The efectiveness of the sequential products appears to be somewhat lower than that f the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency f some animal carcinomas. These data cannot be transposed directly to man. he possible carcinogenicity due to the estrogens can be neither affirmed nor efuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

**Indication**—Demulen is indicated for oral contraception.

**Contraindications**—Patients with thrombophlebitis, thromboembolic disorers, cerebral apoplexy or a past history of these conditions, markedly imaired liver function, known or suspected carcinoma of the breast, known or uspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings**—The physician should be alert to the earliest manifestations of hrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary mbolism and retinal thrombosis). Should any of these occur or be suspected he drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain nd studies of morbidity in the United States have shown a statistically sigficant association between thrombophlebitis, pulmonary embolism, and erebral thrombosis and embolism and the use of oral contraceptives. There ave been three principal studies in Britain[1-3] leading to this conclusion, and ne[4] in this country. The estimate of the relative risk of thromboembolism in e study by Vessey and Doll[3] was about sevenfold, while Sartwell and assoates[4] in the United States found a relative risk of 4.4, meaning that the users e several times as likely to undergo thromboembolic disease without evident ause as nonusers. The American study also indicated that the risk did not ersist after discontinuation of administration, and that it was not enhanced y long-continued administration. The American study was not designed to valuate a difference between products. However, the study suggested that ere might be an increased risk of thromboembolic disease in users of seuential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or omplete loss of vision, or if there is a sudden onset of proptosis, diplopia or igraine. If examination reveals papilledema or retinal vascular lesions medition should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is commended that for any patient who has missed two consecutive periods egnancy should be ruled out before continuing the contraceptive regimen. the patient has not adhered to the prescribed schedule the possibility of egnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been entified in the milk of mothers receiving these drugs. The long-range effect the nursing infant cannot be determined at this time.

**Precautions**—The pretreatment and periodic physical examinations should clude special reference to the breasts and pelvic organs, including Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives**—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted; anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in $T^3$ uptake values; metyrapone test and pregnanediol determination.

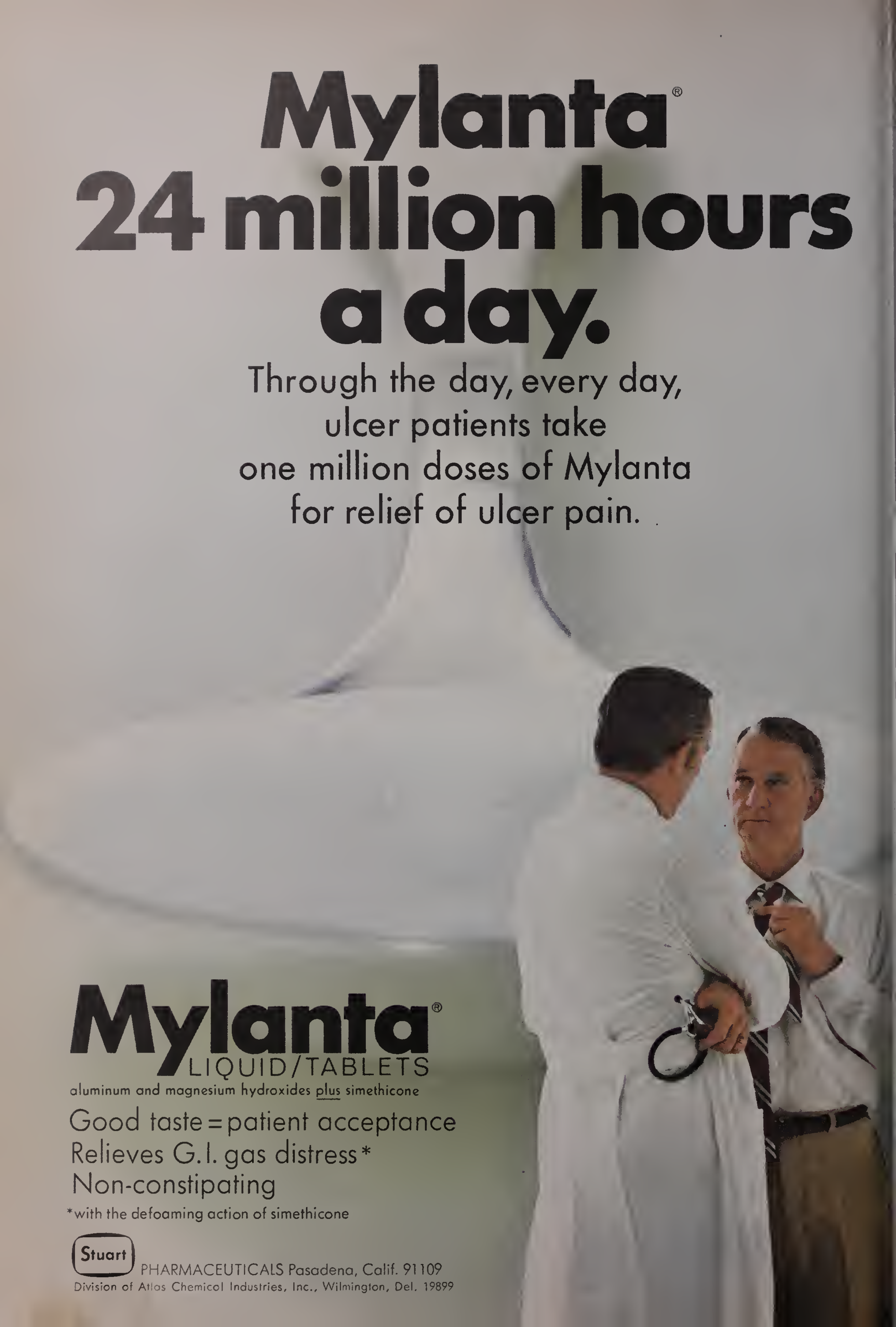
**References: 1.** Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. 90:365-380 (Nov.) 1969.

1A2

SEARLE

Where "The Pill" Began

G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680



Mylanta®
24 million hours
a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

**Mylanta®**
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

A
BUILDING BLOCK
TO RECOVERY

"Welcome back, Ann"
An adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs
One tablet q.i.d.
Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma
One tablet q.i.d.

**Indications:** When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions. Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
**Contraindications:** ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
**Precautions:** It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilie, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
**Adverse Reactions:** Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (resh, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
**Dosage:** One tablet q.i.d.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK: BITABS U.S. PATENT NO 3,004,893 9/70 0-009A 161

# Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

# The causes of vaginitis are multiple

**Trichomonads . . . monilia . . . bacteria**
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

**AVC**
**Cream** (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

**Suppositories** (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

**Contraindications:** Known sensitivity to sulfonamides.
**Precautions/Adverse Reactions:** The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
**Dosage:** One applicatorful or one suppository intravaginally once or twice daily.
**Supplied:** Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

TRADEMARK: AVC AV-104 2/71 Y-149

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

# AVC
# The treatment is singular

# History of the Medical Society of the District of Columbia

## CHAPTER IX

### Functions of a Modern Medical Society

THE FULL-TIME MEDICAL SOCIETY EXECUTIVE is a comparatively new figure on the medical scene. In the late 1920's there were not more than 20 or 30 in the United States. By 1962 they could be counted in the hundreds.

Comparatively few physicians have been attracted to administrative positions with medical associations. That is understandable, because there are much better opportunities for them in the fields for which they are trained. Then, too, physician-administrators have often had to contend with the suspicion of professional favoritism. And there have also been instances of professional jealousy.

However, it should be emphasized that there are well qualified executives among physicians. An example in the District of Columbia was the late Dr. Oscar B. Hunter, a man of unusual energy, imagination, and determination. He would have been an excellent full-time administrator of any medical organization, but he chose to gain national prominence in his own specialty, pathology. With no possibility of benefit to himself he was lavish with his money in support of the Medical Society. In Dr. Hunter's death the Society lost its most loyal and generous supporter.

The complex problems facing medical organizations undoubtedly accounted for the rapid increase in the number of lay medical society executives. Pioneers in this field paved the way for hundreds that were to follow. According to their abilities they have helped to fashion the modern medical society.

In the beginning of Mr. Wiprud's association with the Medical Society the organization became involved in court proceedings which were discussed in a previous chapter. Despite this unexpected development something had to be done to justify his employment. As an experienced medical society executive he knew what the priorities were. First, he must give tangible evidence of the value of his services to individual members and at the same time do what he could to create public good will toward the Society. This, he recognized, was no easy task because the organization was torn by strife from within.

### Ambassadors of Good Will

Dr. Herbert P. Ramsey had been appointed Chairman of the Medical Society's Committee on Public Information in 1934 by the then President, Dr. A. B. Bennett. He made the most of his assignment and before long Washington newspaper offices were open to him. However, his accomplishments were to a large extent undone because of the Society's controversy with Group Health Association. In an effort to stem public criticism the Society employed Fulton Lewis, Jr., a Washington public relations man, who later became nationally known as a radio commentator. He had departed before the arrival of the new Executive Director, who then took over press relations. It was up to him to gain the respect and confidence of newspaper reporters. As he already knew, reporters could be trusted. All they asked were forthrightness and honesty.

One of the problems in this hectic period was to stop individual members of the Society from making statements to the press about the Group Health controversy. In a carefully worded communication the Medical Society's Executive Board asked members to refrain from further comment. The response was gratifying.

Developing a satisfactory relationship with the press required patience. However, in time relations improved to such an extent that fair handling of news involving the Society could be relied upon—not that news stories were always favorable to the organization, because that would have been asking too much.

At a meeting in 1947 of the Medical Society's Committee on Public Relations and the city editors and newspaper reporters of the Washington newspapers the following points were agreed upon:

"The Committee agrees to coöperate with the press in every way possible in its efforts to publish accurate health and medical information.

"It further agrees to prepare a list of physicians in the various specialities and general practice who would respond to calls from reporters seeking verification of scientific information contained in press reports. It was agreed the physician called by the reporter should not be quoted by name except with his permission; then it should be stated that he is a member of the Society's Committee on Public Relations.

"Where matters of the Society's policies are concerned, calls should be directed to the Secretary of the Society who would, if possible, provide the information requested.

"That at intervals the Committee or its representatives meet with the representatives of the press to discuss mutual problems."

This agreement worked out satisfactorily not only to the press but to the profession.

Several programs were presented in the years that followed devoted to press relations. One of the country's distinguished newspaper men, Benjamin L. McKelway, Editor of the Washington *Evening Star* and President of the Associated press, spoke to the Medical Society on March 3, 1954 on the subject, "Newspapermen and Doctors." In the course of his address he said:

> "The doctors and newspapermen inhabit different worlds. They look at the same thing but from an entirely different point of view.
>
> "To the doctor, something new is something untried, something of which little really is known, something to be very skeptical of until it has been proven to be what is claimed for it.
>
> "To the newspaper man, something new is news, to be rushed into print before the other fellow gets it into print. If there are to be fuller explanations they can be made tomorrow.
>
> "To the doctor the relationship with the patient is so personal and so sacred that it is given special dispensation in the law.
>
> "To the newspaperman the news of what happens to almost anybody is public property, provided he can get his hands on it and it's fit to print.

"The doctors are governed by a code of ethics and an ancient oath, the need for which has been tested by centuries of experience. The violation of oath or ethics by a doctor can bring disgrace and the loss of licence to practice.

"Newspapers have codes of ethics, written and unwritten. The written code is not more than 50 years old, and many newspaper men have never seen a copy. The unwritten code is as elastic as the circumstances in which it may be invoked.

"Newspapers are not licensed, nor are newspapermen, since such licensing would contradict the principles of freedom of the press written into the Constitution; therefore, a newspaper which violates an ethical code is subject to no penalty unless the penalty is inflicted by the readers in their loss of confidence and the loss of their patronage.

"In mentioning some of these fundamental differences I am not praising the medical profession or disparaging the newspapers. The comparisons, in other words, are not intended to be odious. There are logical and sound reasons for the differences in concept and in practice between medicine and the press because their separate functions are as far apart as the poles."

Objective though he was, Mr. McKelway was sometimes critical of physicians. Nevertheless, he was a good friend of the Medical Society.

Another panel discussion on press relations entitled "What is Legitimate Medical News?" was presented before the Medical Society in 1955. Participants were Mr. John L. Bach, Public Relations Director for the American Medical Association; Dr. Herbert P. Ramsey, Past President of the Society; and Dr. William B. Walsh, President of the National Medical Veterans Society. At about the same time a Medical Press Conference was scheduled with Mr. Frank Carey, science writer for the Associated Press; Mr. Nate Haseltine, science writer for *The Washington Post*; and Mr. John McKelway, reporter for the Washington *Evening Star*. This was a quiz-type program with physicians as questioners.

Dinners were given annually for the city editors and reporters by the Committee on Public Relations at which there was always frank discussion, not infrequently of a critical nature. There could be no question but that these helped to bring about better understanding between the press and the Medical Society.

### Radio Broadcasts

In the early 1930's Dr. Ramsey and Dr. Roy L. Sexton inaugurated a successful radio program. Broadcast over Station WMAL, it was called "The Doctor is on the Air." The leading character was "Dr. John." Although successful, it was a time-consuming effort for both of the doctors to produce a new program weekly. At the conclusion of the "Dr. John" series there followed several health talks over the same station.

Not until 1950 was there again a regular radio program sponsored by the Committee on Public Information. The series was intitled "You and Your Doctor." Participating in this unique 15-minute weekly program were Drs. William T. Gibb, Roscoe C. Creer, and J. Dewitt Fox. Their dialogue took place supposedly in a hospital staff room. The listeners were invited to send in questions.

In addition to these radio programs there were joint broadcasts such as that undertaken by the Washington Heart Association and the Medical Society. The program entitled "The Heart of America" consisted of thirteen weekly programs. There were also broadcasts in connection with each Annual Scientific Assembly.

### Speakers Bureau

Another means of informing the public was through the Speakers Bureau, which had originated in 1938 prior to the employment of a fulltime executive. It had yet to begin to function and would not have been possible without an adequate office staff. The request for volunteers to speak to lay groups was enthusiastic. Some 150 physicians stated that they would participate.

In order to be certain that all physicians express views generally acceptable to the medical prefession an outline of the talk to be given was requested. This procedure was later abolished as unnecessary. However, a public speaking course was offered, and a number of physicians enrolled. Organizations who were addressed by physicians were provided a form on which to indicate their reaction to speakers. Few negative reports were received.

The program served to emphasize the Medical Society's concern for the health of the citizens of the community. During the period 1939-1962, 956 physician-speakers appeared before such diverse lay groups as the Parent-Teachers Associations, American Legion, Connecticut Avenue Citizens Club, Civitan Club, Unitarian Church Groups, Kalorama Mothers Club, YMCA, and the Georgetown Forum, which was being telecast over WTTG-TV.

In the beginning nearly all speakers were placed by the Speakers Bureau. In time, however, some were contacted directly, but all were members of the Medical Society, which was usually informed of their appearance. As television gained in popularity, use was also made of this medium of communication.

In 1955 the Society's Committee on Public Information promulgated rules for the guidance of physicians in health education which were distributed in pamphlet form.

### Medical Bureau

Shortly after his arrival in Washington in 1938 the Executive Director suggested the establishment of a telephone service for physicians. He had successfully conducted such an exchange for the Medical Society of Milwaukee County over many years. He said it would not only benefit physicians who would have calls from their patients relayed to them when they were not in their offices or homes, but it would be a source of reliable medical information for the public. With respect to the latter he proposed that physicians be carefully classified according to type of practice and that information as to their qualifications be provided the public upon request. In addition he proposed that an "emergency list" of physicians who would be prepared to accept calls from callers who did not have a physician be established.

The cost of operating this project would be provided by physicians who subscribed to the Bureau, which was to be conducted on a nonprofit basis by the Society.

Authorization to establish the Medical Bureau was given, and it began operation on December 1, 1940 with a single switchboard and three telephone operators located in the women's lounge of the Medical Society's building. A sum of $1,000 was earmarked by the Society to get the project under way.

Operation began with 115 subscribers, 95 to the Alternate Listing Service ("If no answer call Medical Bureau–number" Listing in the telephone book under the subscriber's regular listing) and 20 to the Telephone Secretarial Service. In the latter type of service there was a private wire or "tieline" from the subscriber's office or home connected with the Bureau switchboard. When there was no response in the subscriber's office or home, the Bureau operator intercepted the call and took the message.

The Bureau was successful from the very beginning. However, during World War II it had serious personnel problems. In emergencies the office staff had to aid in handling calls. At one critical stage the Executive Director appealed to the Public Health Service for assistance. The Service loaned one of its operators to supply information to callers.

Because many physicians in Washington had entered the Armed Forces there was a shortage of those who would make house calls. It was here that the Bureau filled an urgent public need. There were many persons who would have gone without medical care if it had not been for the Bureau.

Of course, the Bureau had a number of calls from emotionally disturbed persons, alcoholics, drug addicts, and so on, but operators became adept at disposing of such calls. Even so, physicians on the "emergency list" went out on calls where no real need existed. However, more often than not the physicians were paid.

Throughout the 1940's and 1950's many physicians in different parts of the city were most anxious to be on the "emergency list." Some built up practices by accepting the so-called emergency calls. Those on the "emergency list" whenever possible were restricted to their share of calls. With the beginning of the 1960's, because of prosperity and changed conditions, physicians were no longer as desirous of being on the list.

The classified list used for those wishing the names of doctors was much in use. Three names of physicians were given callers in each instance. They were assured that the physicians named were qualified in the specialty claimed. This proved a real public service.

In November 1950, nearly 10 years after the beginning of the service, physician-subscribers to the Bureau had increased from 115 to 720, of whom 383 subscribed to the Alternate Listing Service and 337 to the Telephone Secretarial Service. There were now seven full-time operators, one supervisor, and the manager, Mr. L. A. Zupan, who had been employed by the Executive Director and who later became Assistant Secretary of the Society.

In the first month of its existence (December 1940) 1,321 calls for physicians were recorded. The average in 1950 was 30,000 a month.

In another 10 years (1960) there were 783 subscribers, 290 to the Alternate Listing Service and 455 to the Telephone Secretarial Service. There were "tielines" with the Bureau for the convenience of subscribing physicians, to Children's, Doctors, George Washington University, Providence, and Sibley Hospitals. Other "tielines" were with the Hospital Service Agency, Group Hospitalization, Inc., and the Emergency Ambulance Service.

Full-time operators had increased to 20, and four were employed part-time as relief operators.

The recorded messages in 1959 totaled 55,439.

### Grievances

Critics of the medical profession in the period 1938-1962 frequently charged that organized medicine was incapable of disciplining its members. This was true of many medical societies but the Medical Society of the District of Columbia had Grievance Committees that really functioned. Much of the credit for this must go to the courageous leadership of the Chairmen and members of successive Grievance Committees who were not deterred in passing honest judgments for or against their peers. On occasion these alienated some members but, generally speaking, won the respect of the medical profession and the public.

In extreme cases it was, of course, true that disciplinary measures against physicians were limited to depriving them of their membership and not of their license to practice. This authority rested with the Commission on Licensure. However, what is not usually known to the public is that, although a physician may speak lightly of his Medical Society membership, disciplinary measures can be a serious blow to him and his professional standing.

Those interested will find case reports involving complaints against physicians in the September, November and, December 1954 issues of the *Medical Annals of the District of Columbia.*

### John Benjamin Nichols Award

Long one of Washington's most respected physicians, Dr. John Benjamin Nichols had served the Medical Society of the District of Columbia as its President in 1912. He single-handedly brought about the amalgamation of the Medical Association of the District of Columbia and the Medical Society of the District of Columbia in 1911. He thereupon became President of the united bodies. No assignment was too small or too insignificant for Dr. Nichols to perform on behalf of the Society. He was the author of the History of the Medical Society of the District of Columbia, Part II.

The good doctor, able scholar and historian deserved the recognition of having an award named in his honor. The John Benjamin Nicholas Award, the Medical Society voted, was to be presented annually to the layman or lay group, or both, nominated by the Committee on Public Information and approved by the Executive Board, for outstanding contributions to the health of the community.

Recipients of this Award and the year in which it was presented follow:

The Variety Club, 1953
Station WTOP-TV, 1954
Mrs. Henry Grattan Doyle, Washington, 1955

Joseph H. Himes, President, Group Hospitization, Inc., 1956
Junior League of Washington, 1957
Mrs. Harold N. Marsh, of Washington, 1958
The Lions Clubs of District 22-C, 1959
The Service Guild of Washington, 1960
The Honorable Walter N. Trobriner, President of the Board of Commissioners of the District of Columbia, 1961

### "Health–USA Awards"

The purpose of this Award, sponsored jointly by the Washington Board of Trade and the Medical Society of D.C., was to recognize prominent physicians and laymen who had made outstanding contributions to the health of the people of the Nation. The following have been recipients:

Dr. Leroy E. Burney, Surgeon General of the Public Health Service, and President of the 11th World Health Association, 1958, "for his world-wide leadership in the health field."

U.S. Senator Lister Hill of Alabama, 1959 "for his unusual devotion to the health needs of the people for many years."

Dr. Donald Stubbs, 1960 "for being the most articulate and well-known spokesman for voluntary health insurance in the Nation."

General Howard McC. Snyder, Personal Physician to President Dwight D. Eisenhower, "An outstanding leader in the public eye who symbolizes dedication of his country's flag and to the creed of medicine."

Armour Bobst, Chairman of the Board of Warner Lambert Pharmaceutical Company, 1960, "A great organizer and generous philanthropist for the American Cancer Society and other worthy causes."

Dr. James A. Shannon, Director of the National Institutes of Health, 1961 "for his leadership in the prevention and cure of disease."

Dr. Janet Travel, Personal Physician to President John F. Kennedy, 1961 "for her contributions to the public health."

Dr. William B. Walsh, founder and President of Project HOPE, 1961 "for his leadership in an activity of the People-to-People Health Foundation."

Dr. Howard A. Rusk, Professor and Chairman of the Department of Physical Medicine and Rehabilitation, New York University, Bellevue Medical Center, 1962: "He has developed a rehabilitation service in 37 countries. A great humanitarian."

Dr. Peter D. Comanduras, co-founder of Medico, 1962: "A man who has dedicated his life to humanity."

Dr. Gerald D. Timmons, Dean of the School of Dentistry, Temple University, 1962: "An outstanding leader in dental education."

To assure permanence of the "Health–USA" Award the Medical Society's Executive Board in 1961 voted that the organization's affairs be placed in the hands of an Executive Committee. Choice of the awardees, it was suggested, should be turned over to prominent physicians, scientists and laymen. Dr. Richard T. Sullivan was appointed Chairman of the Executive Committee. The Society appointed Drs. Oscar B. Hunter, Jr., W. Leroy Dunn, and Milton M. Greenberg to represent the Society on the Committee.

## Educational Programs

Officers had often been disturbed because so many members knew so little about the Medical Society. An effort had been made in Los Angeles to remedy this situation. The program of the Los Angeles Medical Association had attracted Nation-wide attention, and the Association announced it had received queries from medical societies throughout the country. Inquirers had been informed that the Orientation Lectures sponsored by the Association for its members had been very well received.

It was this that prompted the Medical Society of the District of Columbia in 1948 to make it obligatory for all members who had been members for less than a year to attend a series of Orientation Lectures. The project was fairly successful. A little better than one-half of those who should have attended were on hand. The majority of those who could not be present wrote letters explaining their absence. Subjects discussed were Medical Organization, Medical Ethics, Medical Practice, Medical Economics, and Public Relations.

The lectures were continued in 1949 and then gave way to Membership Luncheons held in the Library of the Medical Society's Building. These were scheduled for one hour. About half of the hour was devoted by the President and Executive Director to orientation. Since the Library, large though it was, could accommodate only 20 at a sitting frequent luncheons were held. They proved highly successful.

Another program which attracted large numbers of members and their wives was a symposium entitled "Look Again, Doctor!" presented on November 4, 1955. Topics were "Have You Looked at Your Office Lately?", "Patients are People." "What You Owe Other Doctors," "Telephone Manners," and "Have You Looked at Your Secretary Lately?" Dr. Josephine E. Renshaw, Chairman of the Committee on Public Information, was largely responsible for this unique program.

As is well known, residents and interns have little knowledge of the practical problems which will confront them in establishing a practice. This suggested the development of a panel program known as "The Question Hour." The panel consisted of two experienced physicians, an attorney familiar with medicolegal problems, and a representative of the Commission on Licensure. The Executive Director of the Medical Society was the moderator. Questions to the panel were made in writing or orally from the floor. This program was presented to large audiences at D.C. General Hospital for several years and was well recieved.

## Medical Council of the Washington Metropolitan Area

In developing the Medical Society's medical prepayment plan, Medical Service of the District of Columbia, the impact of the program on physicians in adjacent counties in Maryland and Virginia had been overlooked. They were not long in letting it be known that many of the subscribers who were employed in Washington were patients

# Where has all the money gone?

It just goes.

You shake your head.

You see it slip out of your hands and you worry.

Instead of worrying, why not do something about your money? Save some. Painlessly.

Join the Payroll Savings Plan where you work.

Your money will add up faster than ever before, because now there's a bonus interest rate on all U.S. Savings Bonds. Now E Bonds pay 5½% when held to maturity of 5 years, 10 months (4% the first year). That extra ½%, payable as a bonus at maturity, applies to all Bonds issued since June 1, 1970 . . . with a comparable improvement for all older Bonds.

Get a grip on your money the Payroll Savings way. It's an easy way to see your money grow instead of go.

UNITED STATES SAVINGS BOND
50
THE UNITED STATES OF AMERICA
FIFTY DOLLARS
50
ISSUE DATE
SERIES E
L 0 000 000 000 E
NOT TRANSFERABLE

Bonds are safe. If lost, stolen, or destroyed, we replace them. When needed, they can be cashed at your bank. Tax may be deferred until redemption. And always remember, Bonds are a proud way to save.

## Take stock in America.

Now Bonds pay a bonus at maturity.

The U.S. Government does not pay for this advertisement. It is presented as a public service in cooperation with The Department of the Treasury and The Advertising Council.

Efudex®
(fluorouracil)
cream/solution

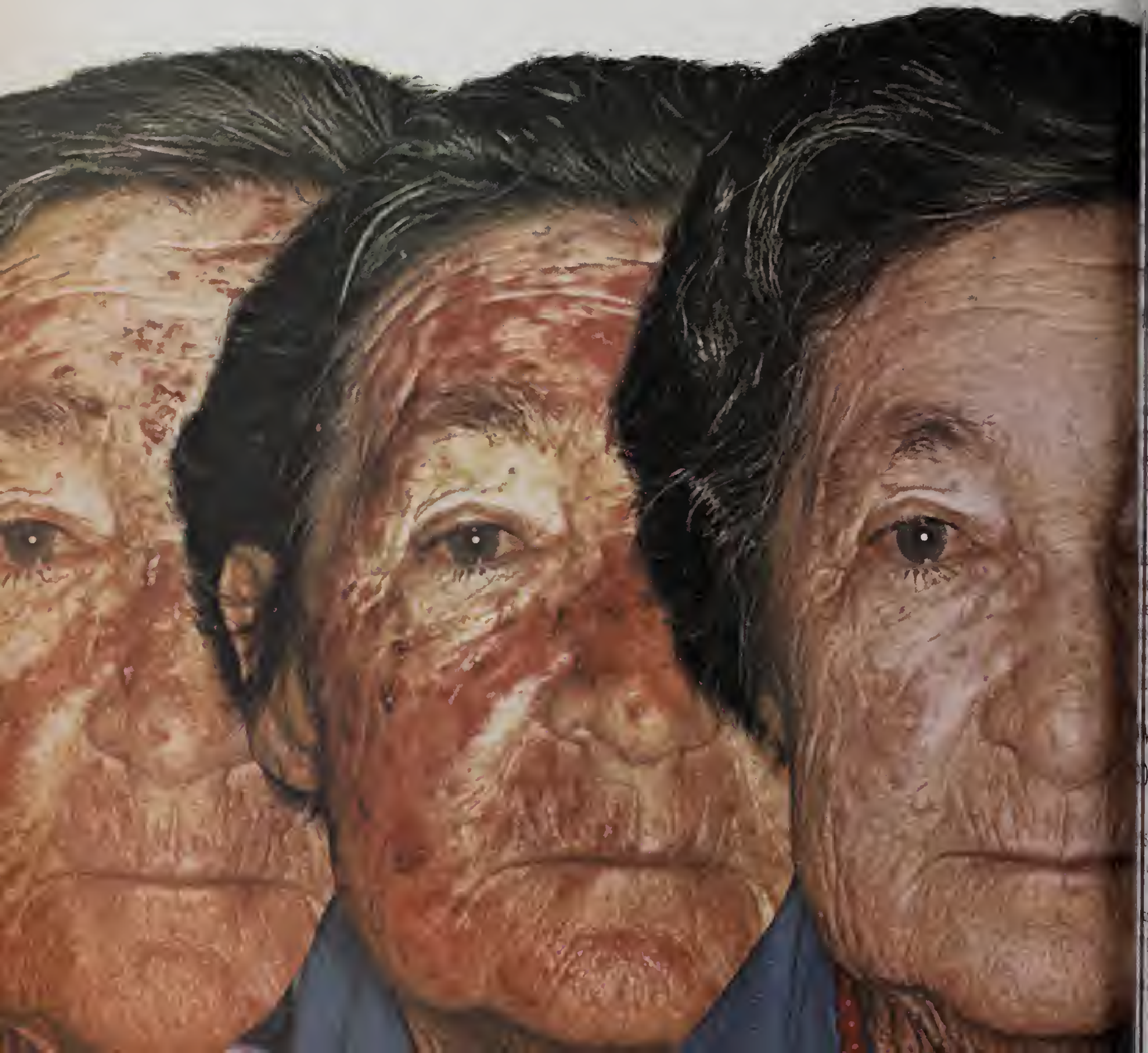
# In the treatment of solar/actinic keratoses–

# An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completel
Residual mild erythema remains in som
areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.



ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

## n alternative ) conventional therapy

Efudex (fluorouracil) offers the physician a cal alternative to cryosurgery, electrodesiccation cold-knife surgery in the treatment of solar/actinic itoses. It is effective, comparatively inexpensive and cially well suited for treatment of these multiple ons. Important, too, is the highly desirable cosmetic lt. Clinical experience demonstrates that treatment Efudex results in an extremely low incidence of ring.*

## ighly effective

In clinical trials, depending on the dosage form strength used, complete involution occurred in 88 per cent of lesions following treatment. The of recurrence was low, ranging from 1.7 to 5.6 per up to a year after completion of therapy. When lesions appeared, repeated courses of Efudex apy proved effective.*

## edictable erapeutic response

Two to four weeks constitutes a typical course udex therapy. The response is usually characteris- d predictable. After three or four days of treat- , erythema begins to appear in the area of keratoses. is followed by an intense inflammatory response, ng and occasionally moderate tenderness or pain. neight of the inflammatory reaction generally occurs weeks after the start of therapy, and then begins bside as treatment is stopped. Within two weeks of ntinuing medication, the inflammation is usually . A mild erythema may remain for two or three hs before gradually receding. Since this response predictable, lesions which do not respond d be biopsied.

## o strengths—two sage forms

Efudex is available as a 2% or 5% solution or % cream. It is applied twice daily by the patient a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two im- nt considerations: First, please consult the com- prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

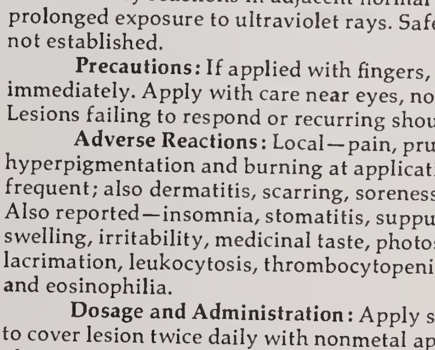
**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



new
Efudex®
(fluorouracil)
cream/solution

on file, Hoffmann - La Roche Inc., Nutley, New Jersey.

# Dear Sir:

# Even the fastest typist in your office will slow down your letters if she doesn't use the ZIP CODES

| List below the addresses (no names necessary) of the people whose Zip Codes you need: | Post Office will fill in Zip Codes here |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Your Name____________________

Your Address____________________

City____________________

State____________________ Zip________

Place in stamped envelope and mail to: Local Post Office.
No return envelope necessary.

Money for shorthand.

Money for electric typewriters.

Money for an efficient mail room.

None of it makes much sense if your letter is going to spend unnecessary hours at the Post Office.

And that's what may happen if your secretary doesn't have the Zip Codes she needs.

Which is why we printed the coupon at left.

Tell your girl to fill it out and mail it in. We'll supply the Zip Codes she's missing. Free.

Then, when you rush off a letter and she rushes it out, we can keep right on rushing it.

All the way to its destination.

*Mail moves the country – ZIP CODE moves the mail!*

advertising contributed for the public good of physicians outside the District. This suggested the need for an organization in which all areas would be represented. With the approval of the Medical Society of the District of Columbia a letter was directed to all county medical societies in the Metropolitan Area proposing the organization of what was to be called the Medical Council of the Washington Metropolitan Area. The proposal, which was made in 1951, met with favor except for one county in Virginia where there was strong opposition on the part of an officer. It was decided to wait until a more propitious time, which finally arrived in 1957.

A dinner was held at which Dr. Ralph M. Caulk, then President of the Medical Society, and the Executive Director explained that a discussion group was contemplated and that any action taken would have to have the approval of each organization represented.

Those present were enthusiastic. It was agreed that the Past President, the President, and the President-elect of each medical society in the Metropolitan Area should constitute each organization's representatives. Dr. Caulk and the Executive director of the Medical Society were elected the first Chairman and Secretary of the Council.

Meetings have been held at agreed upon dates since 1959. General satisfaction with its operation has been expressed although interest has lagged at times.

Dr. James W. Watts, later President of the Medical Society, expressed the view "if the Council continues to function wisely for the benefit of all concerned it will be a real service to the community."

On March 27, 1958 the Council sponsored a Medical Economics Forum held at the Hotel Statler, Washington, and underwritten by the W. S. Merrill Company. It was a tremendous success, more than 1,000 physicians being in attendance.

The Forum on General Problems in Medical Care was again sponsored by the Council at the Hotel Statler on October 29, 1960. The host was the Peoples Drug Stores. The program was excellent, but the attendance fell far short of expectations.

## Medicolegal Guide

The legal and medical professions had long regarded each other with less than complete trust. Physicians, of course, leaned upon attorneys for advice in personal matters and the same can be said of lawyers where physicians are concerned. But physicians had reservations and even suspicions when it came to court proceedings against them.

In an effort to bring about a better relationship between the two professions the Medical Society and the D.C. Bar Association established committees.

One of the projects undertaken by the Society's Committee on Coöperation with the D.C. Bar Association and a committee appointed by the Association was the development of "A Guide for Practice, Medical-Legal Relations for the District of Columbia." The guide was prepared by Messrs. Albert B. Brault, Alvin J. Newmeyer, and Anthony J. Sitiliano, and Drs. Samuel Diener, Everett J. Gordon, and Raymond A. Osbourn, Chairman of the Medical Society's Committee.

Both the Bar Association and the Medical Society approved the Guide, and copies were made available to all members.

## Doctors Office Staffs

As most of the routine in doctors offices is handled by the office staffs the Medical Society sponsored a variety of educational programs for them. The first in 1949 was held in the Medical Society's building. There were 170 present to hear about the functions of the Medical Society, the Medical Bureau, and the *Medical Annals of the District of Columbia.*

A Symposium on "Patients are People" presented in 1953 attracted more than 500 doctors' office assistants.

Successive dinners for doctors' office staffs were sponsored by the Medical Society in connection with the Annual Scientific Assembly from 1953 to 1960.

The staff of Medical Service of the District of Columbia gave an informative symposium for this group in 1961.

## Doctors Symphony Orchestra

The Doctors Symphony Orchestra of Washington, sponsored by the Medical Society, had a brief but not uneventful history. Sparked by the energetic Dr. Richard H. Todd, who was chairman of the committee charged with its organization and with obtaining the necessary financial support, the Orchestra made rapid progress. Players gathered for the first rehearsal at Gallaudet College. They were directed by Howard Mitchell, Director of the National Symphony Orchestra. Shortly thereafter, Richard W. Dirksen, organist and choir director at the Washington National Cathedral, became permanent conductor. Under his direction the orchestra flourished musically, but like all such organizations, had its financial problems.

In 1957 the concert it gave during the Southern Medical Association meeting attracted the attention of Paul Hume, music critic of *The Washington Post,* who wrote:

"The doctors . . . displayed not only a spirited enthusiasm but a sense of real style and vigor in their work, qualities not easily achieved in such outfits. Unity of bowing among the violinists resulted in a tone of solid substance and gratifying quality. The sense of ensemble throughout the orchestra is a real credit to these men and women.

"Entered on the imposing list of Washington's amateur orchestras, the Doctors Symphony is by no means the least impressive."

Mr. Dirksen resigned in the early summer of 1958. Mr. George Manos was appointed his successor. He in turn was succeeded by Dr. James A. Gannon, Jr. Under his direction the Orchestra entered its seventh year, giving a concert at the National Institutes of Health.

Despite the strenuous efforts of Dr. Todd, who raised considerable money for its support, the Orchestra eventually passed out of existence.

## Personal Services

A full-time staff of a modern medical society can perform services that would be impossible otherwise. For example, membership of some 1,200 physicians and their families in Group Hospitalization and Medical Service of D.C. required ample clerical help. The same was true of Group Health and Accident Insurance for physicians, which became effective after several conferences and considerable correspondence.

Keeping records of persons wishing employment in a doctor's office involved interviews and records. Many conferences with the Department of Vehicles and Traffic and the Police Department of the District of Columbia secured for physicians special parking privileges in emergencies. Windshield display cards for this purpose were obtainable at the Medical Society's office.

These and other services were still available to physicians in 1962.

ADDENDUM to the 1971 Committees of the Medical Society of the District of Columbia which was published in the January 1971 issue of ANNALS.

## INTERSPECIALTY COMMITTEE

Howard Katzman, *Chairman*
*(Anesthesiology)*

*Allergy:*
Gilbert Barkin
*Anesthesiology:*
Chalom A. Alpert
*Arthritis & Rheumatic Diseases:*
Myer H. Stolar
*Cardiology:*
Herbert L. Tanenbaum
*Clinical Oncology:*
Stanley A. Schwartz
*Dermatology & Syphilis:*
Robert S. Higdon
*Endocrinology:*
Samuel D. Loube
*General Practice:*
Harold F. McCann
*General Surgery:*
Harry Zehner, Jr.
*Hematology:*
Edward Adelson
*Internal Medicine:*
Irving Burka
*Nephrology:*
Marshall Jacobson
*Neurology:*
Warren Huber
*Obstetrics-Gynecology:*
Joseph Sheffery
*Opthalmology:*
William Glew
*Otolaryngology:*
Blair Webb
*Pathology & Laboratory Medicine:*
Dee R. Parkinson
*Pediatrics:*
Allan B. Coleman
*Physical Medicine & Rehabilitation:*
Isadore Levin
*Plastic Surgery:*
Leon Block
*Psychiatry:*
Deaver Kehne
*Pulmonary Diseases:*
Robert Langevin
*Radiology:*
Warren Nelson
*Thoracic & Cardiovascular Surgery:*
J. Winthrop Peabody, Jr.

Con-
ven-
ience!

**Dicarbosil**®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

DataMedics

**The result is total management control & increased cash flow**

DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

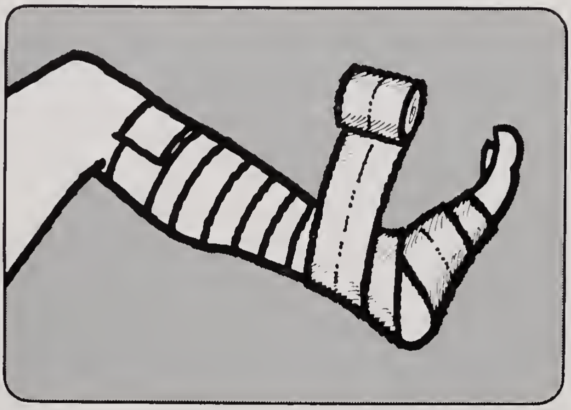
Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:
- Billing
- Bookkeeping
- Collecting delinquent accounts
- Designing offices
- Leasing equipment
- Preparing insurance claim data
- Preparing payroll tax data
- Recruiting personnel
- Training personnel

**How?**
Consultation by appointment.

DM

**DataMedics, Inc.**
**National Headquarters**
**7979 Old Georgetown Road**
**Washington, D.C. 20014**
**(301) 654-7666**
**Cable/Medic**
**Baltimore (301) 792-4424**

**PRIMER**®
*PLUS*
**Flexoplast**®



**A practical, ambulatory treatment for leg ulceration**

**The Flexible Cast:** The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

**EDWARD TAYLOR Ltd.**
A Division of Glenwood Laboratories Inc.
**Tenafly, New Jersey 07670**

Gentlemen:

Please send me

☐ literature

☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name .......................... M.D.

Address ..............................

City ..................................

State .................. Zip ..........

Gone with the wind

**The gas/acid group of disorders**

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

**Frees captured gas...neutralizes free acid**

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

**Always in good taste**

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in:
gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

*when the patient prefers the convenience of a tablet, select*
Silain-Gel® Tablets:

*when the patient prefers a liquid, select*
Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

## Announcing the "Ant**gas**id"

# Silain-Gel®

**Tablets:** simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide
**Liquid:** simethicone plus aluminum hydroxide and magnesium hydroxide

One dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220 sterile solution (300 mg. per ml.)

# Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription
EXPIRES →
2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride injection)

and single-dose 2 m
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials…

**Upjohn** THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN

©1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

nce-popular treatment for back pains
s to have the seventh son of a seventh son
nd or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

headache, a sovereign remedy was
ear a snakeskin round one's head.

## A realistic approach to pain relief

# Empirin'®

## mpound with Codeine
## osphate gr. 1/2 No. 3

tablet contains:
ine Phosphate gr. 1/2 (Warning—
be habit forming), Phenacetin gr. 2 1/2,
in gr. 3 1/2, Caffeine gr. 1/2.

## eps the promise
## pain relief

Co.' narcotic products are
B", and as such are available on oral
ption, where State law permits.

**URROUGHS WELLCOME & CO. (U.S.A.) INC.**
**uckahoe, N.Y.**

# Multivitamins with pyridoxine can impair levodopa therapy

**Your patient with Parkinson's disease and syndrome may be taking a nonprescription multivitamin containing $B_6$.**
Vitamin $B_6$ reportedly reduces the benefits of levodopa, and may lead to discontinuance of therapy because of apparent ineffectiveness.

**Larobec provides needed nutritional support without pyridoxine (vitamin $B_6$)**...and helps ensure that your levodopa therapy is not impaired by self-medication with a pyridoxine-containing multivitamin preparation.

**Complete Prescribing Information:**
Each Larobec tablet contains:

| | |
|---|---|
| Thiamine mononitrate (vitamin $B_1$) | 15 mg |
| Riboflavin (vitamin $B_2$) | 15 mg |
| Niacinamide | 100 mg |
| Calcium pantothenate | 20 mg |
| Cyanocobalamin (vitamin $B_{12}$) | 5 mcg |
| Folic acid | 0.5 mg |
| Ascorbic acid (vitamin C) | 500 mg |

**Description:** For prophylactic or therapeutic nutritional supplementation concomitant with levodopa therapy in patients with Parkinson's disease and syndrome, Larobec provides high potency dosages of the major B-complex vitamins, without pyridoxine (vitamin $B_6$) which has been reported[1,2] to reduce the clinical benefits of levodopa therapy. B-complex vitamins are essential in the anabolism of carbohydrate and protein and in hematopoiesis. Larobec also contains therapeutic quantities of ascorbic acid, a substance involved in intracellular reactions such as tissue repair and collagen formation.
**Indications:** Larobec is indicated for supportive nutritional supplementation when a water-soluble vitamin formula (without pyridoxine) is required prophylactically or therapeutically in patients under treatment with levodopa.
**Warning:** Administration of vitamin $B_6$ may be required if signs of pyridoxine deficiency develop. Larobec is not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin $B_{12}$.
**Dosage and Administration:** One or two tablets daily, as indicated by clinical need.
**How Supplied:** Orange-colored, capsule-shaped tablets, imprinted Roche 73; bottles of 100.
**References:**
1. Duvoisin, R. C., *et al.*: *Trans. Amer. Neurol. Assoc.*, *94*:81, 1969. 2. Cotzias, G. C.: *J.A.M.A.*, *210*:1255, 1969.

**The "incomplete" B-complex**

**Larobec** T.M.
TABLETS

**High-potency nutritional support under prescription control**

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

# Editorials

## HIGHER EDUCATION AND THE NATION'S HEALTH

A Special Report and Recommendations by the
Carnegie Commission on Higher Education

The current Special Report and Recommendations by the Carnegie Commission on Higher Education* is a sequel to the famous Flexner Report issued in 1910,[1] a report that was responsible for fundamental changes in American medical education and in the quality of care in the United States. Certain themes were emphasized in the Flexner account, namely, that 1) patient care must be rooted in a thorough knowledge of basic biomedical sciences, 2) only high quality medical schools should be accredited, 3) these accredited schools should provide both laboratory and clinical experience and should be affiliated with Universities, and 4) the numerous proprietary schools that were flourishing at the time should be closed. According to the Flexner concept, science was the basis of medical education and was a sine qua non for rational diagnosis and treatment. Medical schools and teaching hospitals thus became part of the university academic discipline. This formulation has been the accepted model in the United States since 1910. All medical schools have tried to follow it, but with varying degrees of success.

There is little doubt that the Flexner model resulted in great advances in the quality of medical research and in the standards and quality of individual medical care. Nevertheless, 60 years have passed since the report was issued, and the nation's health problems in 1971 are not those of 1910. Accordingly, the Carnegie Commission has now addressed itself to the problems that surround the health sciences in contemporary America. These unsolved problems not only have medical implications but immense social and economic implications as well. There is general agreement that change is inevitable, that a crisis is pending, that a vacuum already exists. If responsible medical professionals do not fill the vacuum, others will and the results may not be to our liking. Even now, the field of medicine has become an important research area for sociologists, psychologists, and anthropologists. The medical profession must therefore rouse itself and act vigorously from a platform of informed concern. The purpose of this editorial is to call attention to the Carnegie Commission Report and to urge that the issues be studied with care by medical practitioners and academicians alike. The gauntlet is down. If we ignore its challenge, our future will be dictated and we will have only ourselves to blame.

The current Carnegie Commission Report–which will be issued in final form in 1972–"is concerned with the serious shortage of professional health manpower, the need for expanding and restructuring the education of professional health personnel, and the vital importance of adapting the education of health manpower to the changes needed for an effective system of delivery of health care in the United States."

In its deliberations the Commission deals with the essential components of improved health care, namely, 1) manpower, i.e. health care personnel, 2) facilities, 3) financial arrangements, and 4) delivery of care. The Commission reaffirms that vigorous biomedical research is essential for continued progress in combating disease and for high level medical and dental education.

Because of the traditional reluctance of the Federal Government to involve itself in the financing of medical education, financial support to medical schools has been funneled through research grants. After the Second World War, the Federal Government assumed a major role in providing such funds for biomedical research. Since every medical school needs a research program to fulfill its educational requirements, the Commission believes that such support must continue but should be matched with an equal interest in education and in the delivery of health care. The Flexner or research model largely ignored health care delivery outside the medical school and its associated hospital, and–as a self-contained enterprise–set science in the medical school apart from science on the university campus, resulting in duplication of effort. Two new models are considered: (1) the *health care delivery* model in which the medical school, in addition to training, will orient itself to external service, such as research in health care delivery, advice to community hospitals, training of allied health personnel, and continuing medical education, and 2) the integrated science model in which basic science instruction in essentially provided on the university campus while clinical instruction is mainly carried on in the medical school to avoid duplication of effort and resources.

---

*Copies available at $2.95 each from McGraw-Hill Book Company, Highstown, New Jersey 08520

An understanding of the current medical structure is a prerequisite for intelligent modification. Medical education and training in the United States—in so far as health-care delivery is concerned—has been geared to private practice or private medicine rather than public medicine. It may be utopian to think that we as a nation can realistically concern ourselves with the health of all the people, yet the pressure to assume this obligation is real and heavy.

Traditionally, medical care has been offered as a commodity on a competitive market with the best—or at least the highest-priced—going to those who can afford it. Those who cannot afford "high quality" care either make a lower cost selection or make fewer "purchases" in a given time. Those who do not have funds to purchase medical care at all depend upon the largess of society that has assigned premium care to other groups. A primary theme of this argument is that the quality and availability of medical care benefit from being offered as a commodity on the open market, distributed according to the purchasing power of individuals. A negative answer to this proposition does not imply that a viable option is currently available. Nevertheless, the proliferation of third party payments and the opinion that the United States will shortly adopt a national health insurance system (see the agenda of the Senate in the 92nd Congress) speak for the interest in an alternative to—or at least a modification of—the fee for service method.

It should also be borne in mind that any form of national health insurance—from the financial point of view—puts a premium on keeping people well, i.e. preventive medicine, in order to reduce the need for the more expensive service of paying for the care of the ill. Currently available personnel and facilities for delivering health care are inadequate to cover the general population at the present prevalence of health needs, even assuming no population growth. In fact, it can safely be said that sudden removal of financial barriers to health care would inundate our resources. The reason for this disparity is clear—the present system of health care addresses itself chiefly to a limited segment of the population and not to the population as a whole. It is interesting in this regard that although about four-fifths of the population have some private insurance protection, these benefits meet only 22% of costs. The Commission deals with what it believes to be some reasons why this is so. For example, the tendency in the United States has been to emphasize care for the ill and assign relatively secondary importance to the prevention of illness. Despite much talk about the need for individual preventive care, insurance plans are poorly designed to encourage it. In addition, routine examinations of clinically well individuals have as their purpose the detection of occult disease, especially in adults. Comparatively little attention, except in pediatrics—has been paid to preventing the development of such diseases. Caring for overt illness or searching for occult disease is a much more expensive enterprise and is much better adapted to our traditional idea of individual medical service than large scale preventive medicine which requires impersonal attention to populations as opposed to individuals. Since an affluent society is in a position to meet the expenses of individual patient care, at least in part, less emphasis is placed on prevention, which is mandatory in societies lacking the resources to care for large numbers of sick individuals.

Even if vigorous efforts in the prevention of illness are successfully developed and applied, far more health personnel will still be needed if the delivery of medical care has as its target the population as a whole. The Commission concludes that "the most serious shortages of professional personnel in any major occupation group in the United States are in the health services." Furthermore, "Unless we overcome these deficiencies, the present crisis in health care will appear to be a mere ripple in comparison with the mounting waves of problems to be faced when financial barriers to health are lowered." The Commission believes that "gradually we are likely to shift toward a situation in which health care is a public utility." There is considerable comment in the report on how to grapple with the problem of more personnel, but at the same time the Commission hastens to point out that merely increasing the supply of physicians will not solve the problems of uneven geographic distribution of health manpower or of deficient health care in low income areas.

In discussing the needed increase in personnel, two topics are dealt with in detail, 1) training of allied medical personnel, and 2) training of physicians. At the present time, expensively trained physicians are performing many tasks that could readily be carried out by less expertly trained people. In this regard, the Commission calls attention to the successful use of medical corpsmen in the Armed Forces, and favors expanded training of civilian medical associates and assistants who can work under the supervision of doctors and dentists. Allied health personnel can be trained more quickly and less expensively than doctors or dentists and will allow these professionals to use their time and skills more efficiently. Since it is believed that the trend toward provision of primary medical care will continue to reside with internists, pediatricians, and obstetricians, the Commission recommends that there should be increased emphasis on the training of associates and assistants for these three groups of specialists.

Training of allied health personnel must preceed in parallel with training of larger numbers of doctors and dentists. Physical expansion of existing medical schools must be supplemented by new schools if projected needs are to be met. In addition, the Commission believes that new health science centers are required to achieve an adequate geographic distribution of such facilities. Specific attention is also paid to the compelling needs for a more effective geographic distribution of physicians per capita, although no ready method is proposed to achieve this end.

The Commission devotes considerable time to reforms in the organization of medical education. In so doing, it clearly states that all university health science centers need not—in fact should not—conform to a single model. All should not strive to be leading centers of biomedical research, even though every center needs a research program to fulfill its educational function. The proposed alternatives to the Flexner research model were commented upon earlier in this essay. One of these proposals, which consists of schools of basic sciences related to university campuses and schools of medicine related to teaching hospitals, runs the risk of perpetuating the hiatus between basic science and clinical experience. Underlying all reform proposals, however, is the belief that the entire period of education and training is much too long and too costly for the students, the schools, and the agencies that provide student support. The three semi-autonomous periods of premedical, medical and postdoctoral education and training—spanning about 12 years—should be looked upon as an integrated experience, the total length of which should be shortened. The problem before us is where the shortening should take place, and the Commission addresses itself to this issue in some detail. In so doing, a firm view is expressed that a broad liberal arts education is essential for professionals in the health fields and that acceleration at the expense of an adequate liberal arts background is faulty. However, the fact is recognized that high school students now enter college with better preparation in the humanities and social sciences than was true several decades ago. An integrated program must also provide the opportunity for individual student changes along the way to allow intelligent channeling of developing interests in fields that do not necessarily lead to an M.D. degree.

The Commission also devotes considerable attention to the pressing problem of the costs of implementing changes and expansion. Distribution of federal versus state subsidies is viewed in a practical light. For example, less than half of medical school graduates are practicing in the state in which they earned their M.D. degree, whereas the majority of students undertaking residency training remain to practice in the state where they received that training. Accordingly, from the point of view of social return to the state, it seems practical for state support to apply to *post*doctoral training while federal support might better apply at the medical student level.

In addition to premedical, medical, and postdoctoral education, specific comment is made on the need for continuing education of doctors and dentists. "The rate of advance of knowledge and technology is so rapid that physicians and other health professionals must remain students throughout their professional careers or face partial obselescence in 5-10 years." In this regard, the Commission recommends periodic re-examination and re-certification of physicians and dentists.

It has often been said that medicine is the only profession that strives to eliminate the cause of its own existence. Human illness either in terms of prevention or patient care, justifies the establishment of medical schools. However, the Commission emphasizes that adequate health care education, while a prerequisite to adequate health care delivery, by no means guarantees it. "No matter how many health professionals are trained and no matter how adequately medical educational facilities are distributed throughout the nation, Americans will not receive adequate health care unless a system is developed to deliver health care to those who need it, regardless of income, geographic location, age, or race." This is the contemporary challenge. There is much concern about whether we as a nation can meet it.

JOSEPH K. PERLOFF, M.D.
*Professor of Medicine*
*Georgetown University School of Medicine*

### Reference

1. Flexner, A.: Medical Education in the United States and Canada. A report to the Carnegie Foundation for the Advancement of Teaching. Bulletin #4. D.B. Updike. The Merrymount Press, Boston, 1910.

## Patient Referrals Needed

The cooperation of physicians is requested in the referral of patients for clinical studies being conducted by the National Cancer Institute's Baltimore Cancer Research Center at the U.S. Public Health Service Hospital, Baltimore, Md.

Suitable adult and adolescent patients with acute or chronic lymphocytic leukemia or malignant melanoma will be admitted for a research and treatment program employing immunologic and chemotherapeutic regimens.

Upon completion of their studies, patients will be returned to the care of the referring physician who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may write Dr. Howard M. Shapiro or Dr. Michael R. Nardiney, Jr. at the Baltimore Cancer Research Center, U. S. Public Health Service Hospital, 3100 Wyman Park Drive, Baltimore, Md. 21211; or telephone (301) 338-1100, ext. 501.

---

The cooperation of physicians is requested in the referral of patients for clinical studies of untreated malignant disease of the oral cavity, pharynx, larynx, or paranasal sinuses, being conducted by the National Cancer Institute's Surgery Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland. Patients with cancer arising in the nasopharynx will not be included in this study.

Patients selected for admission and treatment will be included in an adjuvant-therapy protocol where the treatment modalities of surgery, irradiation, and chemotherapy will be combined to determine the feasibility of such a therapeutic approach and its potential for decreasing the incidence of local recurrence and metastases. Post-treatment studies are planned which will include cooperative followup between the referring physician and the National Cancer Institute.

Upon completion of their studies, patients will be returned to the care of the referring physician, who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may write or telephone: Dr. Alfred S. Ketcham, Clinical Center, Room 10N-116 National Institutes of Health Bethesda, Maryland 20014 Telephone: (301) 496-4164 or Dr. Robert C. Hoye, Clinical Center, Room 10N-112 National Institutes of Health, Bethesda, Maryland 20014 Telephone: (301) 496-5767.

---

The cooperation of physicians is requested in continuing to refer patients with essential hypertension, not having evidence of target organ disease, to the Research Foundation of the Washington Hospital Center.

A longitudinal study of the overall effects of different treatments in hypertension, now in its 5th year, needs more patients who will be taken care of by a special hypertension study clinic. This clinic is also serving as a model for a multiteam comprehensive health service delivery.

Physicians who wish to have their patients considered for this study may contact Dr. Frederick Wolff or Dr. Pio Poblete at the Washington Hospital Center. Telephone 541-6535.

---

The cooperation of physicians is requested in the referral of patients for the study of keloids being conducted by the National Heart and Lung Institute's Experimental Therapeutics Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients with keloids and prominent hypertrophic scars (including burn scars) are needed for this study. Suitable patients will be admitted for evaluation and treatment with drugs and/or surgical excision. When indicated, surgery will be performed by a plastic surgeon.

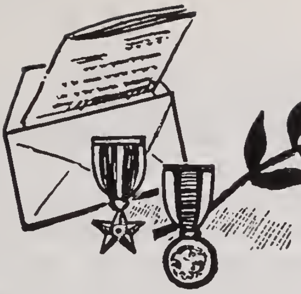
Upon completion of their studies, patients will be returned to the care of the referring physician, who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may write or telephone: Dr. I. Kelman Cohen, or Dr. Harry R. Keiser, Clinical Center, Room 7-N-256 National Institutes of Health, Bethesda, Maryland 20014 Telephone: (301) 496-2044 or (301) 496-2452

- desirable associates
- office space
- ancillary services
- may be obtained thru

**A CLASSIFIED ADVERTISEMENT**

- in the MEDICAL ANNALS



# News & Personals

## SUMMARY OF EXECUTIVE BOARD ACTIONS

### Proceedings of the January 25 Meeting

Dinner for the Board members was served in the Exhibit Hall of the Medical Society. Dr. Henry D. Ecker presided at his first meeting as Chairman of the Board, which was attended by Drs. Marvin C. Korengold, Darrell C. Crain, James E. Boland, Warren D. Brill, Frank S. Pellegrini, William S. McCune, Frank S. Bacon, John J. Hughes, C. Willard Camalier, Mr. Thomas Sadler, and Mr. F. P. Ferraraccio. Present by invitation were John Lewis Smith, III and Dr. Wallace M. Yater.

The minutes of the December 14, 1970 meeting were approved as submitted.

**Committee Meetings**: The Secretary reported the following committees had met since the last meeting of the Board:

December 15 Grievance Committee
16 Legislative Committee
Mental Health
17 Medicolegal
18 Scientific Assembly (1971)
29 Program Committee
January 5 Liaison with Allied Professions
6 Smoking and Health
7 Medical Bureau
Physician Placement
Traffic
8 Utilization
11 Air Pollution
Membership
12 Medical Ethics & Professional Conduct
Medicolegal
Board of Credentials
January 13 Fee Review
Mental Health
15 Program Committee
18 Public Information & Education
19 Grievance
20 Legislative
21 Aviation Medicine
Medicine & Religion
25 Environmental Health

Special Meetings:

January 6 1971 Committee Chairmen Dinner
13 Breakfast Meeting (Drs. Carpenter, Standard, Korengold, & Crain)
18 Foundation Subcommittee

**Board of Credentials**: On recommendation of the Board of Credentials 10 applicants were elected to Active membership, and 1 to Resident-Intern membership. Their names appear on page 221. Approval was given to the following changes in membership status:

*Transfer*

*Active to Special:* Lendall Gay

*Resignations*

*Active:* J. Willard Blankenship, Jacob Joseph Katzow, Robert Mendelsohn, Wilson A. Powell

*Associate:* Robert J. Benford, Joseph V. Casella, John J. Curry, Dorothy Dobbs, Edwin Hillel Kolodny, Howard McQuarrie, Robert P. Nirschl, Laszlo Ormandy, and Max Robinowitz

*Resident-Intern:* Lee W. Davis, Michael Ivy, and Mandell Don Stearman

**Life Insurance Program**: Dr. Ecker introduced the subject by referring to the recommendation of the Insurance Committee regarding the adoption of a life insurance program for members and then turned the meeting over to Mr. Smith, Legal Counsel, for his comments. Mr. Smith concurred with the recommendation of the Insurance Committee. He stated that he did not think the Society's membership in the Small Business Association would hinder its current tax status. Consideration was given to further discussion of this question at the upcoming membership meeting of the Society; however, it was decided that a written communication would still be necessary in order to determine the degree of interest in such a program. In conclusion, a motion was made and carried to accept the recommendation of the Insurance Committee after determination of membership interest.

**AMA Report to the 24th Clinical Convention:** After a few brief informative comments by the Delegates, the Board moved to accept the report by Dr. Hughes and Dr. Camalier, with commendation to both for doing a fine job of a difficult task.

**Subcommittee on Annals:** Dr. Ecker asked that the Subcommittee on Annals continue to meet with Dr. McCune as Chairman and Drs. Boland, Korengold, and Hughes as members. He asked the Committee to consider in depth the survey by questionnaire and to make further recommendations.

**Mental Health Committee Recommendation:** Dr. Ecker, Chairman, opened the discussion on the Mental Health Committee's recommendation by pointing out that the Committee's desire to act in lieu of a Section on Psychiatry regarding insurance carrier problems in the purview of Medical Service of D. C. and H. I. C., and not of the Medical Society. After a brief discussion, a motion was made and carried that the recommendation of the Mental Health Committee as follows: "that, whereas there is no Section on Psychiatry of the Medical Society of D. C., the Mental Health Committee proposes that it act in lieu of such a section and be given authority to appoint representatives from the Committee to serve in the same capacity as representatives from other specialty sections", is not the prerogative of the Society as to such representation and further, that they should seek to form a Section on Psychiatry.

**Liaison with Allied Professions Recommendation:** After a brief discussion, a motion was made and carried that "the Committee on Allied Professions concurs with the D. C. Pharmaceutical Association that when a pharmacist is not on duty in a drug store that a sign should be posted to indicate 'off duty'; also a similar sign should be posted at all times indicating the pharmacist's duty hours." This would provide greater information to patients and allow for more efficient filling of prescriptions.

**Medicolegal Committee Recommendations:** The following two motions were made and carried regarding recommendations made by the Medicolegal Committee: (1) that the Medical Bureau Committee be given approval to proceed to discontinue service for physician subscribers having restricted service, and further, that the Executive Board be notified of the names of these individual physician subscribers and that the Executive Board refer these subscribers to the proper Society disciplinary committee for action, and (2) that the Executive Board approve increasing the Society's present comprehensive liability insurance policy above the current $300,000 limit. To provide for additional coverage, the Executive Board is requested to obtain an umbrella policy for the Medical Society, if such is necessary, to extend the present $300,000 limit.

**Physicians' Assistants and Recertification:** A motion was made and carried to accept Dr. Korengold's request that Ad Hoc Committees be appointed to deal with these two subject areas.

**Winter Membership Meeting:** Dr. Korengold reported that the Winter Membership Meeting had been set for March 10, 1971; that one letter of announcement had been sent out; and that a second letter would soon be mailed. He said that the program of the meeting calls for a brief review of business matters, and a guest speaker, Dr. Paul Sanazaro, Director of the National Center for Health Services, Research and Development, of the Department of Health, Education and Welfare.

**Grievance and Ethics Committee to Consider Non-Member Cases:** There was a brief discussion on the above subject, both pro and con, regarding the Medical Society's responsibility to the medical community to follow through on cases when they involve non-member physicians. It was decided that this question is covered by the Constitution and Bylaws of the Society and therefore needs no further action.

### Other Business

1. Dr. Boland suggested that a working committee of representatives from the Bar Association, the Medical Society, and the Insurance Carriers be formed to deal with the problems of increasing malpractice insurance rates. A brief discussion followed and no action was taken.

There being no further business, the meeting was adjourned at 10:10 p.m.

## MEETINGS

The Department of Pediatrics of the Georgetown University School of Medicine will present its Annual Pediatric Postgraduate Symposium "Current Advances in Clinical Pediatric Practice" on March 31, 1971. Guest speakers will be Dr. Benjamin M. Kagan of the Cedars of Lebanon Hospital of Los Angeles, and Dr. Barbara M. Korsch of the Children's Hospital of Los Angeles.

All interested physicians are invited to attend. Additional information may be obtained by writing: The Department of Pediatrics, Georgetown University Medical Center, Washington, D. C. 20007.

# ►D.C. HEALTH NOTES

## Neighborhood Health Centers

Neighborhood Health Centers, a method of providing local comprehensive health care, have come a long way since they were first started two years ago in the District of Columbia.

Now numbering 8, the Centers play a vital role in the D. C. Health Services Administration's provisions for providing primary health care in those areas of the city where physicians and health facilities are in short supply.

The acceptance of these Neighborhood Health Centers, which offer a variety of health services at the community level, is reflected in the dramatic rise in the number of patients treated.

Soon after October 1968, when the first 6 Centers were opened, approximately 5,000 patients utilized the facilities each month. Currently some 12,000 patients come to the Health Centers monthly.

Each Neighborhood Health Center is the primary provider of comprehensive and family-centered medical care. Previously, public health clinics offered only specialized services, such as tuberculosis control, venereal disease control, and maternal and child health care.

The Neighborhood Health Center provides primary medical care for sick patients of all ages, as well as preventive services such as immunizations, routine health examinations, and nutrition education.

At the present time, 66% of the patients seen at the Neighborhood Health Centers are pediatric, 13% are adult medical, and the remainder consist of obstetrics and birth control.

The Neighborhood Health Centers are designed to serve areas with a population of approximately 25,000. Assigned to each Health Center is a team of 20 health workers, including three physicians, nurses, and ancillary health personnel. All services are provided on an outpatient basis. Patients requiring in-patient care are referred to a hospital that is designated to serve the residents of the area.

Thus far, the Neighborhood Health Centers have played a major role in bringing essential health services to the community.

Names and locations of the eight Neighborhood Health Centers are:

ARTHUR CAPPER NEIGHBORHOOD HEALTH CENTER
1011 7th Street, S.E.

POTOMAC GARDENS NEIGHBORHOOD HEALTH CENTER
1227 G Street, S.E.

ANACOSTIA NEIGHBORHOOD HEALTH CENTER
1329 W Street, S.E.

CONGRESS HEIGHTS NEIGHBORHOOD HEALTH CENTER
8th and Xenia Streets, S.E.

NORTHWEST ONE NEIGHBORHOOD HEALTH CENTER
941 North Capitol Street, N.E.

PARKSIDE NEIGHBORHOOD HEALTH CENTER
701 Kenilworth Terrace, N.E.

H STREET NEIGHBORHOOD HEALTH CENTER
635 H Street, N.E.

SOUTHWEST NEIGHBORHOOD HEALTH CENTER
850 Delaware Avenue, S.W.

During the past two years the Neighborhood Health Centers have changed the medical care habits of thousands of people. Many who were regular patients at the outpatient and emergency rooms at D. C. General Hospital now enjoy the health care received at their neighborhood health center. Despite the shift in utilization patterns of some patients from the hospital outpatient department to the neighborhood health center, we are still experiencing an increased load in both areas.

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*Associate Director, Department of Human Resources*

# ►DOCPAC BRIEFS

Involvement is "the thing" today. To become involved in local and national medical politics takes many hours of a physician's valuable time. Time he takes away from his patients and his family.

Many of us, either because of a lack of interest in politics or because we do not have the extra hours it takes, do not get involved. This is where DOCPAC your political arm gets you involved–thru your contribution, both on the local and national scene.

So get involved now! Send your dues to DOCPAC, 825 New Hampshire Avneue, N.W., Washington, D. C. 20007. Individual membership is $20.00; family membership (including wife and children), $30.00

# GENERAL NEWS

Dr. Thomas F. Collins, who joined the active staff of Providence Hospital in 1937 when it was located on Capital Hill, has been named an honorary member of the hospital's Executive Committee. This post was especially created for Dr. Collins in recognition of his professional and personal dedication during his more than three decades of association with the hospital.

Application for the 1973 **Associate appointments in the research programs conducted by the National Institutes of Health** are now available. These two-year positions offer unusual opportunities for training and experience in clinical and laboratory investigation for young physicians and dentists in most of the health specialties and basic science disciplines.

Candidates who are entering internship in July 1971 and those with more advanced training may apply. Physicians may also be considered for residency training deferment through the Public Health Service CORD program until the date of their NIH assignment.

Final deadline for receipt of applications is April 15, 1971. Interview period is from June 7 through June 18. Successful candidates will be notified of their selection on July 6.

Application materials may be obtained from: Chief, Clinical and Professional Services, NIH, Bethesda, Maryland 20014.

The **Milbank Memorial Fund** has awarded $19,000 **to Dr. Robert R. Huntley**, a Milbank Faculty Fellow and Chairman of the Department of Community Medicine and International Health at Georgetown University. The funds will be used to develop teaching and research programs within the Department of Community Medicine and International Health.

The Milbank Memorial Fund founded in 1905, has for a number of years supported activities in family planning, population control and demography, mental health and preventive and community medicine. The faculty fellowship, established in 1964, has provided support for 56 teachers in preventive and community medicine in North and South America.

Formal activation of the **Institute of Medicine** and the appointment of **Dr. Robert J. Glaser as its acting president** has been announced by the National Academy of Sciences.

The Institute's purpose, as stated in its charter is "the protection and advancement of the health of the public," including the conduct of study programs relating to the delivery of health care, medical education, and biomedical research and development. In carrying out this purpose, the Institute of Medicine will serve to strengthen and extend the ability of the National Academy of Sciences to respond to societal and governmental needs in medicine.

The **Fairfax Hospital** has recently been fully accredited by the Joint Commission on Accreditation of Hospitals.

The hospital accreditation program, officially sponsored by the American College of Physicians, the American College of Surgeons, the American Hospital Association and the American Medical Association, is a voluntary, cooperative, non-profit public service. There is no law or regulation which requires a hospital to seek accreditation.

In **1970 infant mortality** fell to the lowest level ever recorded in the United States, 20.7 per 1,000 live births, according to a report by the National Institute for Health Statistics. The rate represented a decrease of 5% from the 21.8 rate in 1968.

The George Washington University has named **Dr. Philip Handler**, President of the National Academy of Sciences, as its **first Distinguished Professor of Science**. The Distinguished Professor's first assignment will involve participation on a Special Advisory Committee to evaluate the entire scope of Medical Center activities, focusing on local and national pressures for improved delivery of health services.

**Dr. Robert W. Berliner**, deputy director for science at the National Institutes of Health, received the **American Heart Association's 1970 Research Achievement Award** for his contributions to Cardiovascular Research. Dr. W. Proctor Harvey, president of the American Heart Association, presented the award.

## Forty-seventh Kober Lecture

Gorman Auditorium
Georgetown University Hospital

Wednesday, April 14, 1971—8 p.m.

Speaker:
**Robert J. Coffey, M.D.**
Professor of Surgery
Georgetown University School of Medicine

Selected by the Medical Society
of the District of Columbia

Subject:
**"Experience in the Management of Hyperparathyroidism"**

Admission Free

Members and guests of the Medical Society of the District of Columbia are cordially invited to attend

## NEW MEMBERS

### Active

MANSOUR F. ARMALY, M. D. Office: 2150 Pennsylvania Avenue, N. W. Born in Shefa Amer, Palestine. Medical degree: American University of Beruit, 1952. Specialty: Ophthalmology.

ROY H. BUNALES, M. D. Office: 800 Southern Avenue, S. E. Born in Manila, Philippines. Medical degree: University of Philippines, 1964. Specialty: General Surgery.

REGINALD CHISHOLM, M. D. Office: 1901 11th Street, N. W. Born in Morant Bay, Jamaica. Medical degree: Howard University, 1962 Specialty: Internal Medicine.

FLETCHER CARL DERRICK, JR., M. D. Office: 2150 Pennsylvania Avenue, N. W. Born in Johnston, South Carolina. Medical degree: Medical University of South Carolina, 1958. Specialty: Urology.

DAVID H. FRAM, M. D. Office: 2141 K Street, N. W. Born in Fort Worth, Texas. Medical degree: Yale University School of Medicine, 1963. Specialty: Psychiatry.

FAY BURTON GRAVES, M. D. Office: 901 Varney St. S. E. Born in Bangor, Maine. Medical degree: Tufts University School of Medicine, 1947. Specialty: Pediatrics.

ERNEST N. KRAYBILL, M. D. Office: 901 23rd Street, N. W. Born in Elizabeth Town, Pennsylvania. Medical degree: University of Pennsylvania, 1962. Specialty: Pediatrics.

LAWRENCE S. LESSIN, M. D. Office: 2150 Pennsylvania Avenue, N. W. Born in Bethesda, Maryland. Medical degree: University of Chicago, 1962. Specialty: Hematology.

LUCIO S. VILLA-REAL, M. D. Office: 800 Southern Avenue, S. E. Born in Manila, Philippines. Medical degree: University of Santo Tomas, 1962. Specialty: General Surgery.

BEN ZEICHNER, M. D. Office: 1545 18th Street, N. W. Born in New York City. Medical degree: New York University School of Medicine, 1963. Specialty: Psychiatry.

### Resident-Intern

ELIGIO BATOY AGUHOB, M. D. Office: Washington Hospital Center. Born in Oroquieta, Mis. Occ., Philippines. Medical degree: University of Santo Tomas, 1961. Specialty: Anesthesiology.

## NATIONAL & REGIONAL MEETINGS

March 28–April 2: American College of Physicians. Denver. Address: Dr. Edward C. Rosenow, J., Executive Director, 4200 Pine Street, Philadelphia, 19104.

March 29–April 3: American College of Radiology. St. Louis. Address: William C. Stronach, LLB, Executive Director, 20 N. Wacker Drive, Chicago, 60606.

April 19–April 22: Southeastern Surgical Congress. Miami Beach, Florida. Address: Dr. A. H. Letton, Secretary-Director, 340 Boulevard NE, Atlanta, 30312.

April 26–27: AMA Congress on Environmental Health–Solid Waste Management. New York. Address: AMA Dept. of Environmental Health, 535 N. Dearborn Street, Chicago, 60610.

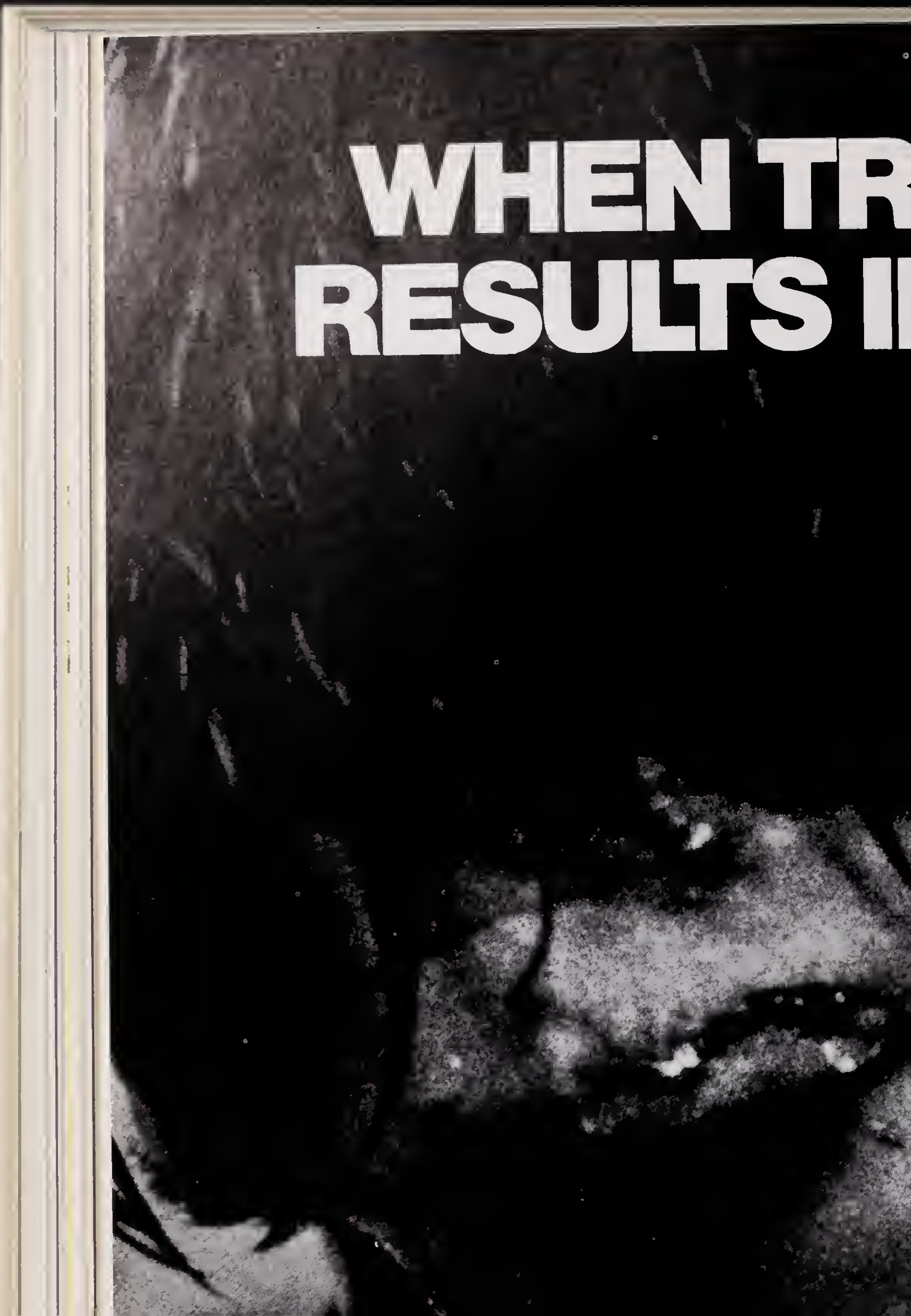
April 28–May 1: American Pediatric Society. Atlantic City, New Jersey. Address: Dr. Charles D. Cook, Secretary-Treasurer, 333 Cedar Street, New Haven, Connecticut 06510.

**April 29–May 3: American Psychoanalytic Association, Annual Meeting. Shoreham Hotel, Washington, D. C. Address: Mrs. Helen Fischer, Executive Secretary, 1 East 57th Street, New York 10022.**

April 29–May 1: American Society for Clinical Pharmacology and Therapeutics. Atlantic City, New Jersey. Address: Dr. Richard T. Smith, Secretary-Treasurer, 1718 Gallagher Road, Norristown, Pennsylvania 19401.

**April 30–May 2: American Academy of Psychoanalysis. Mayflower Hotel, Washington, D. C. Address: Miss Jean Baker Miller, Secretary, 510 East 86th Street, New York, 10028.**

**May 1: American College of Psychiatrists. Shoreham Hotel, Washington, D. C. Address: Dr. Peter A. Martin, Secretary-General, 857 Fisher Bldg, Detroit, 48202.**


WHEN TR
RESULTS I

# Norgesic...the versatile analgesic provides effective analgesia and relief of associated muscle spasm

offers fast onset of symptomatic relief

produces a high level of analgesia

affords sustained pain relieving action

provides predictable relief—overall satisfactory response in approximately 80% of patients

the versatile analgesic **NORGESIC®**

(orphenadrine citrate, 25 mg.; aspirin, 225 mg.; phenacetin, 160 mg.; caffeine, 30 mg.)

**ontraindications:** Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in
atients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the
ladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be
ensitive to aspirin, phenacetin or caffeine.

ince mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and prop-
xyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene
Darvon®).

**arnings:** USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in
e child-bearing age has not been established, use of the drug in such patients requires that the potential benefits
f the drug be weighed against its possible hazard to the mother and child.

SE IN CHILDREN The safe and effective use of this drug in children has not been established; therefore, the
hysician must weigh the benefits against the potential hazards.

**recautions:** It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity.
aution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should
lso be used with caution in patients with tachycardia.

**dverse Reactions:** Side effects of Norgesic are those seen with APC or those usually associated with mild
nticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth,
lurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache,
izziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient
ay experience some degree of confusion Mild central excitation and occasional hallucinations may be ob-
erved. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia
ssociated with the use of Norgesic has been reported. No causal relationship has been established.

**osage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

**iker Laboratories, Inc.**
ORTHRIDGE, CALIFORNIA 91324

A SUBSIDIARY OF 3M COMPANY

If you don't do it, it won't get done.

GIVE THE UNITED WAY

advertising contributed for the public good

ADVERTISING COUNCIL®

# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

*Classified advertisements of a professional nature are free to members.*

## REAL ESTATE

FOR SALE: Choice building lot for physician or dentist office-home combination. Lot is level, sidewalk and all utilities are in. Ideal location on corner of Old Georgetown and Bells Mill Roads, opposite Wildwood Shopping Center. Excellent financing available. Telephone (202) 299-3101.

FOR SALE OR RENT: Home-office combination in Belair Bowie, Maryland. Ideal location. Office has over 600 sq. ft., 3 examining rooms. Excellent for GP, pediatrician, internist, etc. Presently occupied by professional. Available for sale or rent late summer. Contact Dr. Herbert Gordon (301) 262-3132.

## OFFICE SPACE AVAILABLE

FOR RENT: One choice medical office available. Approximately 500 sq. ft. Many windows. Private Powder room. All utilities, char service, central individually controlled air conditioning included. Contact owner/manager, 1800 Eye Street Medical Building. Telephone (202) Re 7-1299.

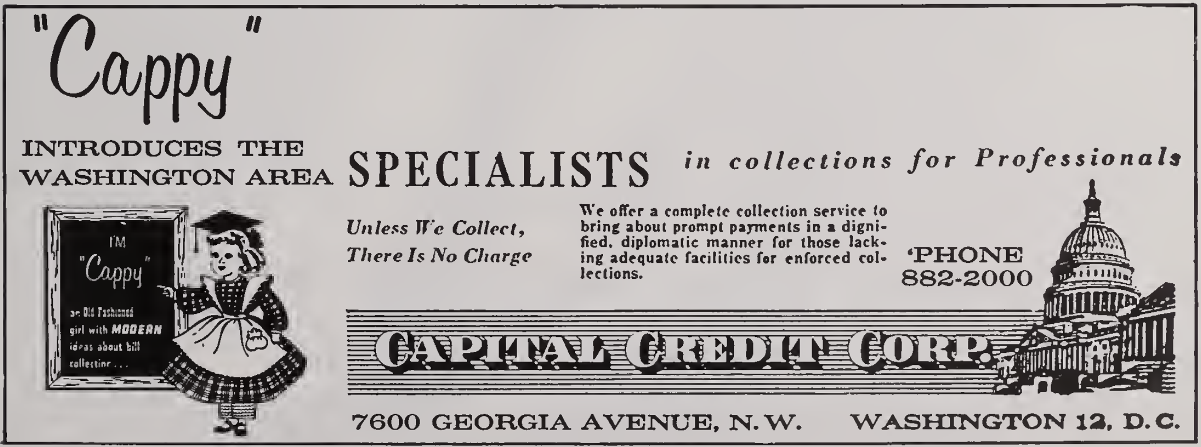
## OFFICE SPACE WANTED

D. C. licensed physician interested in the use of 1100 sq. ft. of space in medical building on Eye Street, N.W. in exchange for medical coverage of adjacent para medical corporation. For more details call Mr. Reilly (202) 298-9084.

## EQUIPMENT FOR SALE

HAMILTON EXAMINING TABLE and matching walnut chair, instrument cabinet, and dressing stand. 50″ office desk and chair. Surgical instruments. Telephone (202) 234-6646 or 265-0065.

INCOME TAX SERVICE: Will you pay only what is required by law? May I assist you in maximizing your tax benefits? I have a MBA degree and five years experience in performing tax services for my clients. Please call Dean A. Peterson, (202) 836-4031.


I'M
"Cappy"
an Old Fashioned girl with MODERN ideas about bill collecting . . .
"Cappy"

INTRODUCES THE WASHINGTON AREA SPECIALISTS *in collections for Professionals*

*Unless We Collect, There Is No Charge*

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

'PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.

# The bluest blue chip of them all.

Danny Sullivan never made the baseball team. But because he's had the right training, you'd be surprised at the number of jobs open to him.

The nicest part, of course, is that another handicapped person is getting the most out of his life.

However, there's something else good, too.

Vocational rehabilitation pays.

Every dollar spent to rehabilitate a person like him—someone with a physical or mental handicap—will increase his lifetime earnings by $35. (Thirty-five taxable dollars that he earns himself.)

Which is why vocational rehabilitation is good for everybody.

We call our program HURRAH. Actually, HURRAH stands for "Help Us Reach & Rehabilitate America's Handicapped."

When you realize there are five million handicapped people who can be helped by vocational rehabilitation, you can see what a big job is ahead.

If you want to know more about the job that vocational rehabilitation is doing, and the rich dividends it pays, write to HURRAH, Box 1200, Washington, D.C. 20013.

Ask for "Rehabilitation—A Blue Chip Investment." It's free.

Then if anyone ever asks you if rehabilitation is worth the cost, you'll know what we at HURRAH have found out:

From every angle, a human being is the bluest blue chip investment there is.

HURRAH. The State-Federal Program of Rehabilitation Services.

Help Us Reach & Rehabilitate America's Handicapped **HURRAH**

advertising contributed for the public good

The U.S. Department of Health, Education, and Welfare.

# INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

Page

**Bank**
Riggs National Bank ........ 2

**Business Counseling**
Data Medics ........ T-207

**Collection Agencies**
Capital Credit Corporation ........ 11

**Dietetic Products**
Campbell Soup Company ........ T-185

**Insurance**
McDermott Insurance, Inc. ........ T-182
Mutual of Omaha ........ 3-C

**Equipment and Supplies**
Kloman Surgical Supply Company ........ 14

**Investment Planning**
Eugene F. Roesser ........ 6
Russell, Marsh, & Kennedy ........ 6

**Nurse Registries**
Association of Undergraduate and Practical Nurse Registry ........ 6
District of Columbia Manpower Administration ........ 6

Page

**Pharmaceuticals**
Arch Laboratories ........ T-206
Bristol Labs. ........ T-183
Burroughs Wellcome ........ T-183, T-211
Geigy Pharmaceutical ........ 4
Eli Lilly & Company ........ 8
National Drug ........ T-189, 190, 17, 18
Riker Labs. ........ T-222, 9
A. H. Robins Company ........ T-208–209
Roche Laboratories ........ 2-C-1, 200–201, 212, 4-C
G. D. Searle ........ T-186–187
Stuart Pharmaceutical ........ T-188
Edward Taylor, Ltd. ........ T-207
The Upjohn Company ........ T-210
Warner-Chilcott ........ 14–15

**Pharmacies**
Maxwell & Tennyson ........ T-182
Peoples Drug Stores ........ 7

**Recording Services**
Richard O. Repplier ........ 13

**Sanitariums**
Kalorama Convalescent Home ........ T-182

**Vacation & Recreation**
Boar's Head Inn ........ 14

T-text

One Gift
Works Many
Wonders
GIVE THE UNITED WAY

*Long recording experience*
*and low rates*

Audiorich

*Recording studio*
*and on-location recording*

24-HOUR PHONE: 585-5092

Surgical Supplies and Equipment

*Complete Fitting Service for*
*Ladies and Men*

**KLOMAN SURGICAL SUPPLY CO.**
**1028 19th Street, N.W.**
**Washington, D. C. 20036**

***Telephone:* 223-3444**

**MEETINGS, SEMINARS in refreshing country-estate atmosphere. Golf, tennis, lakes. Versatile new conference facilities for up to 250. Dining in historic Old Mill Room, new Tack Room (cocktails).**

*Write for Meetings Portfolio or call 703-296-2181.*

**THE BOAR'S HEAD INN**
Charlottesville, Virginia

New Nilcol-
A Comprehensive
Formula:

| DESCRIPTION | Contents in mg Tablet | Elixir—each 15 ml |
|---|---|---|
| phenylpropanolamine HCl | 50 | 25 |
| chlorpheniramine maleate | 4 | 2 |
| glyceryl guaiacolate | 200 | 100 |
| dextromethorphan HBr | 30 | 15 |
| alcohol | | 10% |

The scored, elliptical tablet is light violet. The elixir is deep violet in color and grape-flavored.

ACTIONS Each component of Nilcol has been selected to provide symptomatic relief of congestion and cough in upper respiratory disorders.

Phenylpropanolamine hydrochloride is a vasoconstrictor which reduces congestion of the nasopharyngeal mucosa. Chlorpheniramine maleate, a widely used antihistamine, helps to control allergic symptoms. The expectorant is glyceryl guaiacolate which helps to increase the secretion and decrease the viscosity of fluids of the respiratory tract. Dextromethorphan is a well-known, centrally acting antitussive. Nilcol may minimize the need for topical decongestants.

INDICATIONS Nilcol is indicated for nasal and bronchial congestion; coughs and other symptoms of respiratory infections including influenza and the common cold; other respiratory conditions such as sinusitis, allergic rhinitis or hay fever.

CONTRAINDICATION Hypersensitivity to any ingredient.

PRECAUTIONS Because of the possibility of drowsiness, patients should be cautioned against driving and operating machinery. Administer with caution to patients with hyperthyroidism, hypertensive cardiovascular disease, diabetes mellitus and liver disease. Use in pregnancy is not recommended.

ADVERSE REACTIONS Anxiety, restlessness, tension, insomnia, tremor, weakness, headache, vertigo, sweating, nausea, and vomiting may possibly occur.

SUPPLIED Tablets in bottles of 100. Elixir in bottles of 32 fl oz (1 qt) with dosage cups. N-GP-11-4C

WARNER-CHILCOTT
Morris Plains, New Jersey 07950

This is a test of this publication's advertising "Exposure." Please see below.

# Introducing The Fully Therapeutic "Age-Calibrated" Non-Narcotic Cough/Cold Formula... For Any Member Of The Family*

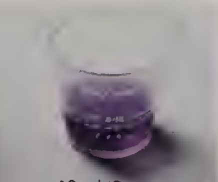
*Not for infants under 2 years of age.

# New Nilcol™ ℞ Tablets/Elixir

ach scored tablet contains: Phenylpropanolamine HCl 50 mg, Chlorpheniramine maleate 4 mg, Glyceryl guaiacolate 200 mg, Dextromethorphan HBr 30 mg.
ach 15 ml of elixir contains: Phenylpropanolamine HCl 25 mg, Chlorpheniramine maleate 2 mg, Glyceryl guaiacolate 100 mg, Dextromethorphan HBr 15 mg, alcohol 10%.

## An Expectorant • An Antihistamine
## A Decongestant • A Non-Narcotic Antitussive

For a complimentary package, send your Rx with the name Nilcol written on it to:
Warner-Chilcott Laboratories, 201 Tabor Road, Morris Plains, New Jersey 07950.
Att: M. Adams, St.J.

| Prescribe or 4 times daily | youngsters 2 to 4 | youngsters 4 to 6 | youngsters 6 to 12 | grown-ups |
|---|---|---|---|---|
| ick-Snap-Apart **Tablets** | | | ½ tablet | one tablet |
| Delicious, rape-Flavored **Elixir** | † 5 ml (1 tsp) |  10 ml (2 tsp) | ½ oz (1 tbs) | 1 oz (2 tbs) |
| ℞ (4 days — -waste therapy) | 3 oz | 6 oz | 8 oz | 16 oz |

†Plus "Age-Calibrated" Medicine Cup for Precision-Assured Dosage.

U.S.S.R.
CHINA
INDIA
SAIGON
INDONESIA
AUSTRALIA

**"Around the World in 80 Days"...**

. . .An expense-paid trip with one hitch --
a 60-day hitch in a South Viet Nam civilian hospital
delivering vitally needed medical care to the people
of South Viet Nam.

American physicians are urgently needed, especially general practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists.

For further information please write to:

**Program Director**
**Volunteer Physicians for Viet Nam**
**American Medical Association**
**535 North Dearborn Street**
**Chicago, Illinois 60610**

# The girth control pill

# Tepanil® Ten-tab®

(continuous release form)

## (diethylpropion hydrochloride, N.F.)

## works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

**Contraindications**: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.
**Warning**: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.
**Adverse Reactions**: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.
**Convenience of two dosage forms**: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-103 / 2/71 / U.S. PATENT NO. 3,001,910

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

**Painful night leg cramps...**

unwelcome bedfellow for any patient–including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

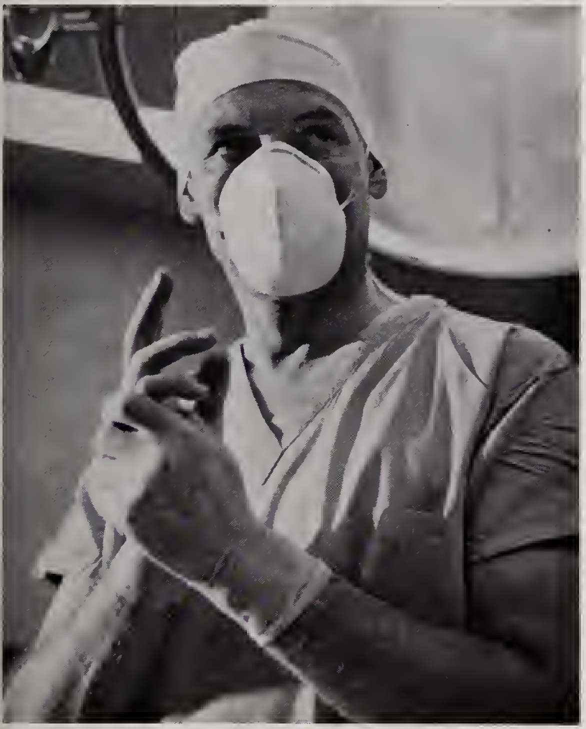
**Prescribing Information—Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**

**Quinamm**™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)

# Make Sure You Have Cash To Live On When You're Disabled!

Even doctors get sick and hurt! When your turn comes and you can't continue your practice, will you still be able to provide for yourself and your family—pay for food, clothing, your home, the everyday living expenses, plus extra medical bills?



You can have this financial security with the Disability Income Protection Plan available to members of the Medical Society of the District of Columbia.

PAYS UP TO $225.00 A WEEK
when you're sick or hurt
and can't practice!

*Check these other important features of this plan:*

- Benefits are TAX-FREE, for you to use as you see fit.
- Confinement is never required during disability.
- Benefits are payable regardless of other coverage.
- There is no automatic age termination.
- Your policy is guaranteed renewable while the program remains in force regardless of benefits paid to you or any future changes in health.
- Premiums are low, due to the mass purchasing power of your Society.
- There are few exceptions. Your policy does not cover: suicide or attempted suicide; loss during a declared or undeclared war or while a member of an armed service; loss due to noncommercial flying; costs of childbirth, pregnancy or any complication.

Fill out the coupon below and mail it today! You'll receive complete information on this outstanding Disability Income Protection Plan available to you as a member of the Medical Society of the District of Columbia. Don't delay!

JOSEPH E. JONES, Administrator
1666 Connecticut Avenue, N.W.
Washington, D.C. 20009 Phone: (202) 483-3100

Please rush to me complete information on the Disability Income Protection Plan available to me as a member of the Medical Society of the District of Columbia!

Name________________________________

Address______________________________

City______________State___________ZIP Code______

Underwritten by

Mutual of Omaha®
*The Company that pays*

Life Insurance Affiliate: United of Omaha

MUTUAL OF OMAHA INSURANCE COMPANY
HOME OFFICE: OMAHA, NEBRASKA

# The hypochondriac fugitive from anxiety

For many patients with hypochondriacal tendencies, physical complaints represent a device by which they can avoid facing emotionally charged personal problems. When anxiety is pronounced, the calming action of Librium (chlordiazepoxide HCl), by relieving anxiety, may foster communication, favor productive counseling and accelerate relief of anxiety-linked symptoms.

Librium is used alone or concomitantly with certain primary drugs for some medical conditions associated with undue anxiety. It has demonstrated a dependable antianxiety action in many clinical areas. For oral administration, Librium is supplied in three dosage strengths to control mild, moderate and severe anxiety.

## whenever moderate to severe anxiety is a contributory factor

# Librium® 10 mg

(chlordiazepoxide HCl)
1 or 2 capsules
t.i.d./q.i.d.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been establis
clinically.

**Adverse Reactions:** Drowsiness, at
and confusion may occur, especiall
the elderly and debilitated. These
reversible in most instances by pro
dosage adjustment, but are also o
sionally observed at the lower dos
ranges. In a few instances syncope
been reported. Also encountered
isolated instances of skin eruptio
edema, minor menstrual irregulari
nausea and constipation, extrapyra
dal symptoms, increased and decrea
libido—all infrequent and generally c
trolled with dosage reduction; change
EEG patterns (low-voltage fast acti
may appear during and after treatm
blood dyscrasias (including agranulo
tasis), jaundice and hepatic dysfunct
have been reported occasionally, mak
periodic blood counts and liver funct
tests advisable during protracted thera

ROCHE

Roche Laboratories
Division of Hoffmann-La Roc
Nutley, N.J. 07110

*Volume 40 · Number 4 · April 1971*

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
6 MAY 1971

# Medical Annals of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

## GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER NUMBER

**Diagnostic Usefulness of Rectal Biopsy**
WILLIAM O. DOBBINS, III, M.D.

**Familial Systemic Lupus Erythematosus**
FERNANDO A. SALAZAR, M.D., AND DOUGLAS N. ROBBINS, M.D.

**Electrical Reversion of Atrial Fibrillation**
JOSEPH LINDSAY, JR., M.D.

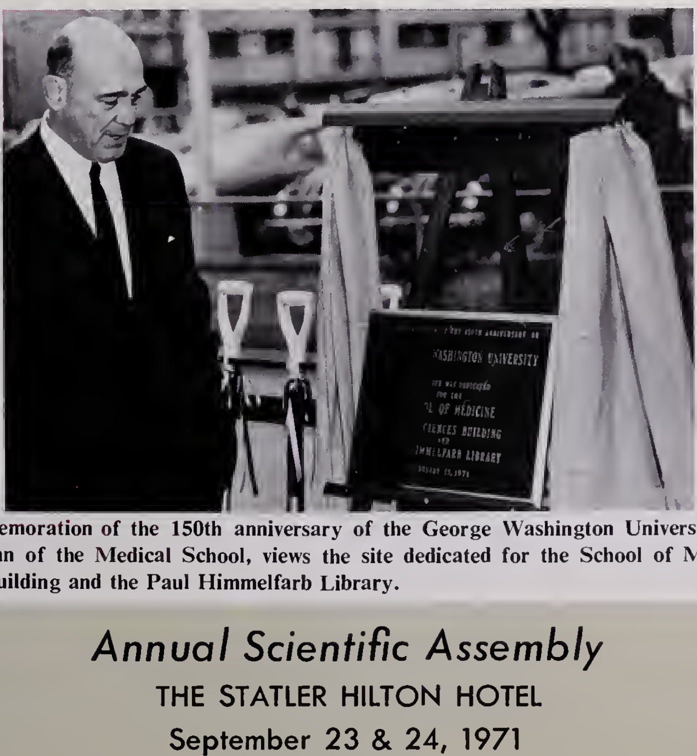
**Chewable Isosorbide Dinitrate in Coronary Insufficiency**
PATRICK A. GORMAN, M.D., AND JOHN M. EVANS, M.D.

**Hypercatabolic Patient with Acute Renal Failure**
ANN M. THOMPSON, M.D., ATIN GUHA, M.D., STEPHEN GOLDBERGER, M.D.
NORMAN KRAMER, M.D., AND ALVIN PARRISH, M.D.

**Heredofamilial Tremor: A Case Study**
RICHARD RESTAK, M.D., AND SEAN O'REILLY, M.D.

**Hymenoptera Allergy**
HALLA BROWN, M.D., AND HARRY S. BERNTON, M.D.

**Teaching of Anatomic Pathology with Color Fiche**
J. CHANDLER SMITH, M.D.

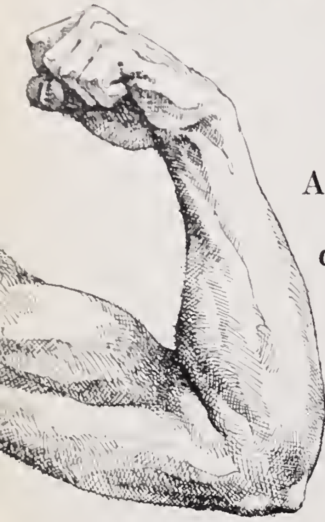


In commemoration of the 150th anniversary of the George Washington University, Dr. John Parks, Dean of the Medical School, views the site dedicated for the School of Medicine Basic Sciences Building and the Paul Himmelfarb Library.

*Annual Scientific Assembly*
THE STATLER HILTON HOTEL
September 23 & 24, 1971

25 Shattuck St.
Boston, Mass. 02115

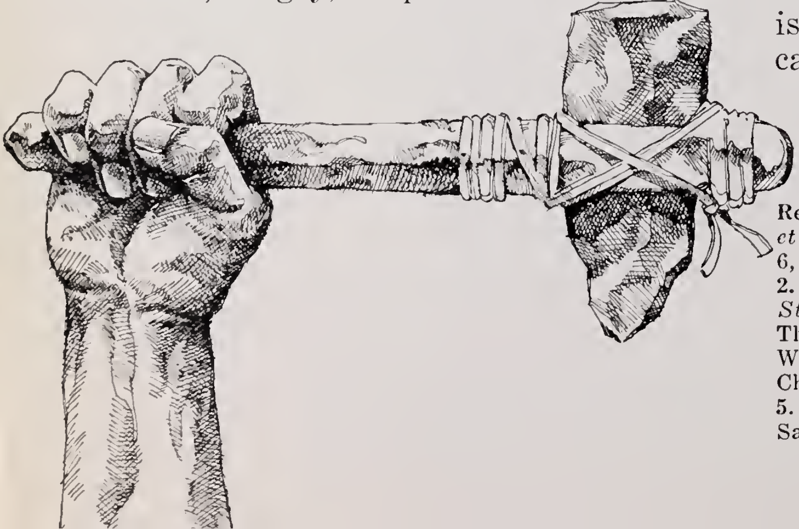
# IF MORE MEN CRIED



**At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]**

**Hypersecretion—an atavistic response.** Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

**By chance? A lean, hungry lot.** Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



**Big boys don't cry.** If more men cried maybe fewer would wind up with duodena ulcers. But men will be men—the sum total of their genes and what they are taught. Schottstaedt observes that when a mother admonishes her son who has hurt himself that big boys don't cry, she is teaching him stoicism.[4] Crying is the negation of everything society thinks of as manly. A boy starts defending his manhood at an early age.

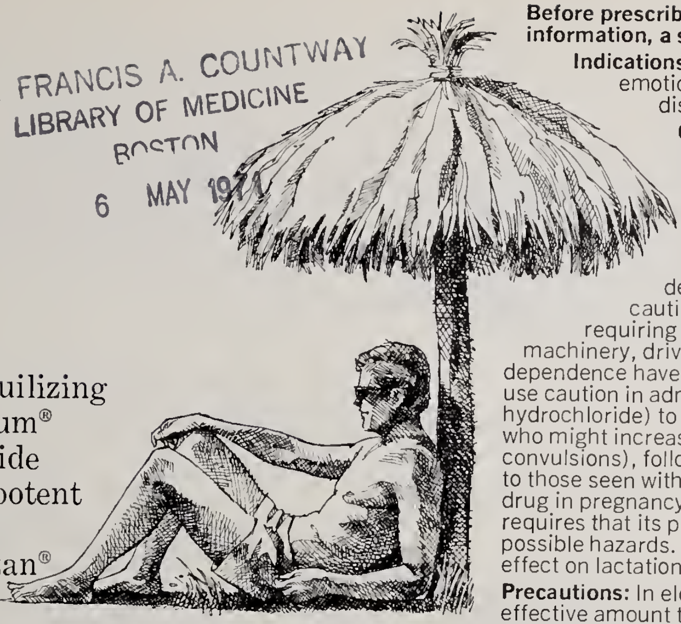
**Take away stress you can take away symptoms**

There is no question that stress plays a role in the etiology of duodenal ulcer. Alvarez[5] observes that many a man with an ulcer loses his symptoms the day he shuts up the office and starts out on a vacation. The problem is, the type of man likely to have an ulcer is the type least likely to take long vacations or take it easy at work.

**The rest cure vs. the two-way action of Librax.**® For most patients, the rest cure is as unrealistic as it is desirable. Still, the stress factor must be dealt with. And here is where the dual action of adjunctive Librax can help. Librax is the only drug that com-

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. M. *et al.* (eds.): *Harrison's Principles of Internal Medicine,* ed 6, New York, McGraw-Hill Book Company, 1970, p. 1444 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wolff's Stress and Disease,* ed. 2, Springfield, Ill., Charles C Thomas, 1968, pp. 68-69. 3. *Ibid.,* p. 257. 4. Schottstaedt W. W.: *Psychophysiologic Approach in Medical Practice* Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 163 5. Alvarez, W. C.: *The Neuroses,* Philadelphia, Pa., W. B Saunders Company, 1951, p. 384.

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
6 MAY 1971

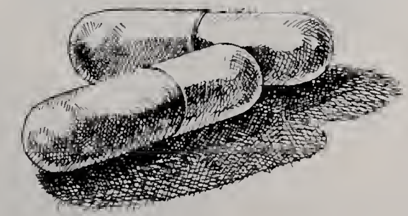


ines the tranquilizing
ction of Librium®
chlordiazepoxide
[Cl) with the potent
nticholinergic
ction of Quarzan®
lidinium Br).

**Protects man from his own hungry per-
onality.** The action of Librium reduces
nxiety—helps protect the vulnerable patient
rom the psychological overreaction to stress
hat clutches his stomach. At the same time,
he action of Quarzan helps quiet the hyper-
ctive gut, decreasing hypermotility and
ypersecretion.

**An inner healing environment with 1
r 2 capsules, 3 or 4 times daily.** Of course,
here's more to the treatment of duodenal
cer than a prescription for Librax. The pa-
ent—with your guidance—will have to ad-
ist to a different pattern of living if treat-
ent is to succeed. During this adjustment
riod, 1 or 2 capsules of Librax 3 or 4 times
ily can help establish a desirable environ-
ent for healing.

Librax: It can't change man's nature.
ut it can usually make it easier for men to
pe with the discomfort of stress—both
ychic and gastric—that can precipitate
d exacerbate duodenal ulcer.
brax: Rx #60 1 cap. *a.c.* and 2 *h.s.*



**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

**Contraindications:** Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

**Precautions:** In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

**in the treatment of duodenal ulcer**

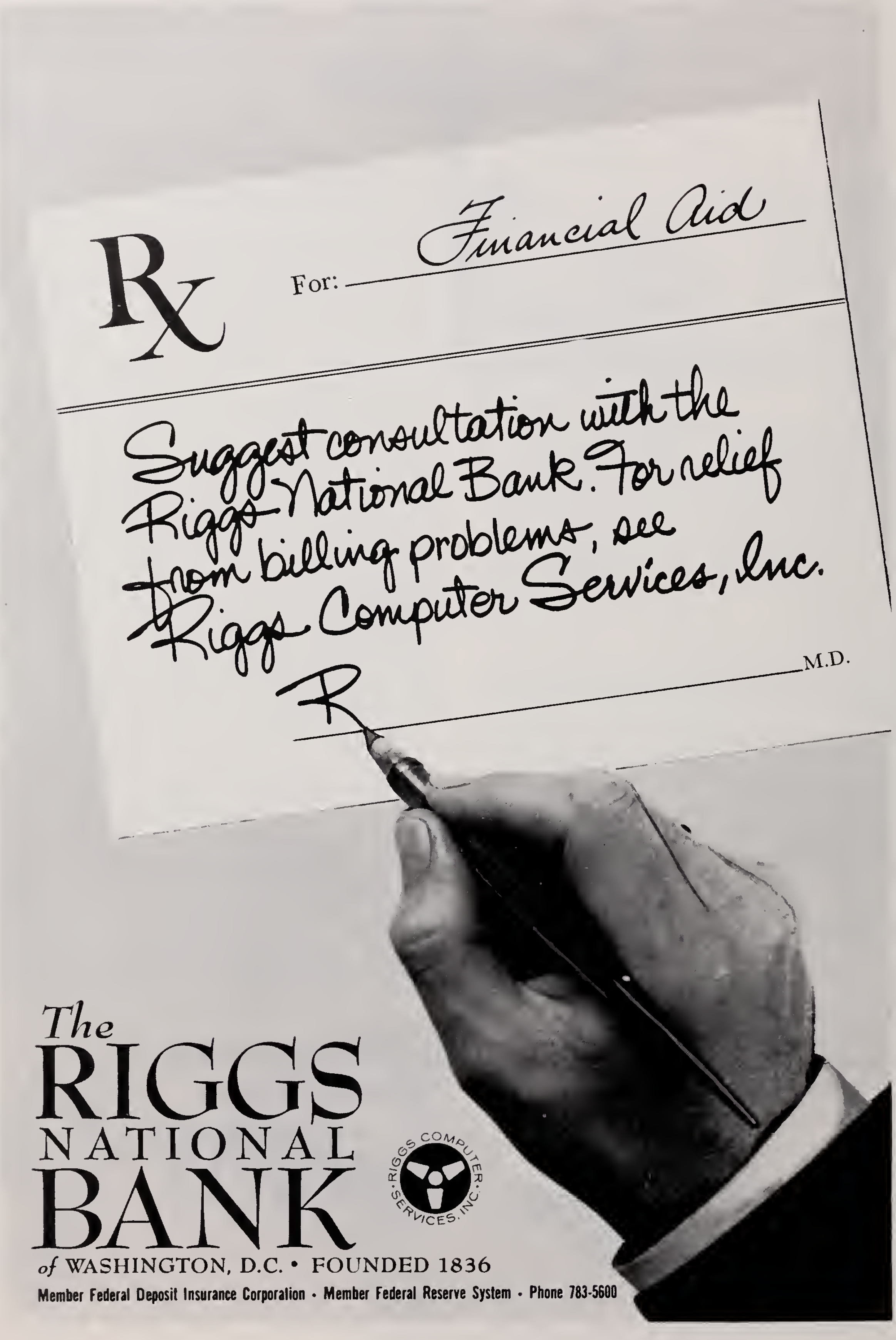
**adjunctive**

# Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



℞ For: Financial Aid

Suggest consultation with the Riggs National Bank. For relief from billing problems, see Riggs Computer Services, Inc.

M.D.

The RIGGS NATIONAL BANK of WASHINGTON, D.C. • FOUNDED 1836

RIGGS COMPUTER SERVICES, INC.

Member Federal Deposit Insurance Corporation • Member Federal Reserve System • Phone 783-5600

VOLUME 40 • APRIL 1971

**EDITOR**

Wallace M. Yater, M.D.

**ASSISTANT TO THE EDITOR**

Judith E. Perruso

**MANAGING EDITOR**

Francisco P. Ferraraccio

**EDITORIAL BOARD**

Brian Blades, M.D.
Frederic G Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**

Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Frank S. Bacon, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

**MEDICAL ANNALS**
of the
**DISTRICT OF COLUMBIA**

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

DU-7019

# Who's afraid of the big bad enema?

**We all are.** But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can — except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents" and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

**Dulcolax®...it's predictable**
bisacodyl

GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 UNDER LICENSE FROM BOEHRINGER INGELHEIM G. M. B. H.

# MEDICAL ANNALS
## of the District of Columbia

## *Contents for April*

GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER NUMBER

### SCIENTIFIC ARTICLES

Diagnostic Usefulness of Rectal Biopsy. *William O. Dobbins, III, M.D.*, Washington, D.C. 223
Familial Systemic Lupus Erythematosus. *Fernando A. Salazar, M.D.*, Warrensville Heights, Ohio, *Douglas N. Robbins, M.D.*, New York City and *Raymond Scalettar, M.D.*, Washington, D.C. 227
Electrical Reversion of Atrial Fibrillation—Selection of Patients in 1971. *Joseph Lindsay, Jr., M.D.*, Washington, D.C. 239
The Effects of Chewable Isosorbide Dinitrate in Coronary Insufficiency: A Report on Exercise Electrocardiograms in Thirteen Patients. *Patrick A. Gorman, M.D., and John M. Evans, M.D.*, Washington, D.C. 235
The Hypercatabolic Patient with Acute Renal Failure. *Ann M. Thompson, M.D.*, *Atin Guha, M.D.*, *Stephen Goldberger, M.D.*, *Norman Kramer, M.D.*, and *Alvin Parrish, M.D.*, Washington, D.C. 239
Heredofamilial Tremor: A Case Study. *Richard Restak, M.D.*, and *Sean O'Reilly, M.D.*, Washington, D.C. 243
Hymenoptera Allergy: When to Immunize. *Halla Brown, M.D.*, and *Harry S. Bernton, M.D.*, Washington, D.C. 246
Teaching of Rudiments of Anatomic Pathology with Color Fiche. *J. Chandler Smith, M.D.*, Washington, D.C. 248

### EDITORIAL

Sequel to the Sesquicentennial 277

### SPECIAL SECTION

History of the Medical Society of the District of Columbia. Chapter X. *Theodore Wiprud* 267

### MISCELLANY

President's Page: "Let George Do It??" 258
5th Executive Director of the Medical Society of the District of Columbia—*Francisco P. Ferraraccio*
D.C. Health Notes 278
Legal Council to the Medical Society of the District of Columbia—*John Lewis Smith, III* 281
Clinical Center Studies
Summary of Executive Board Actions 283
General News 286
Book Reviews 294
Meetings 295
New Members 295
Books Received 287
National and Regional Meetings 288
Classified Advertisements 296
*Medical Annals Staff and Officers of the Medical Society* *Adv. 3*
*Index of Advertisers* *Adv. 12*

---

COPYRIGHT ©, 1971 BY THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

*Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

ILOSONE
LIQUID
250
Lilly

**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
**Ilosone® Liquid 250**
Erythromycin Estolate
(equivalent to 250 mg. of base per 5-ml. teaspoonful)

*Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206*

Lilly

100204

2 ways to give your patients a month's therapeutic supply of Vitamin C:
40 pounds of spinach or 30 Allbee® with C
30 Capsules
Allbee® with C
Each capsule Contains:
Thiamine mononitrate (Vit. B1) 15 mg
Riboflavin (Vit. B2) 10 mg
Pyridoxine hydrochloride (Vit. B6) 5 mg
Niacinamide 50 mg
Calcium pantothenate 10 mg
Ascorbic acid (Vit. C) 300 mg
A·H·ROBINS
AHR AHR

Although raw spinach is an excellent source of vitamin C, your patient would have to eat 40 pounds a month (about 1⅓ lbs. a day) to get as much ascorbic acid as is contained in just one bottle of 30 Allbee with C capsules (taken one capsule daily). If the spinach is cooked, a person would have to ingest more than twice as much because cooking destroys much of the vitamin C, and still more is lost when the liquid is drained off. Allbee with C also contains therapeutic amounts of B-complex vitamins. This handy bottle of 30 capsules gives your patient a month's supply at a very reasonable cost. Also the economy size of 100. Available at pharmacies on your prescription or recommendation.

A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

Main
DONNA
2 tab
3 tim

vacation in
a vial:
the spasm
reactors
in your practice
deserve

"the Donnatal® Effect"

| | each tablet, capsule or 5 cc. of elixir (23% alcohol) | each Donnatal No. 2 | each Extentab® |
|---|---|---|---|
| hyoscyamine sulfate | 0.1037 mg. | 0.1037 mg. | 0.3111 mg. |
| atropine sulfate | 0.0194 mg. | 0.0194 mg. | 0.0582 mg. |
| hyoscine hydrobromide | 0.0065 mg. | 0.0065 mg. | 0.0195 mg. |
| phenobarbital | (¼ gr.) 16.2 mg. | (½ gr.) 32.4 mg. | (¾ gr.) 48.6 mg. |
| (Warning: may be habit forming) | | | |

***Brief Summary.*** Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

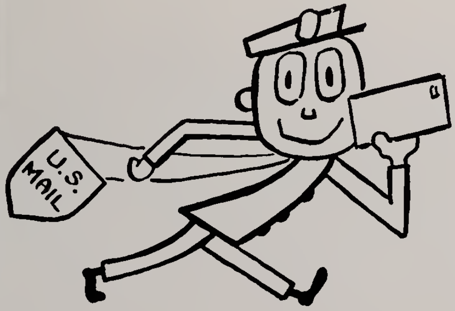
A. H. ROBINS COMPANY, RICHMOND, VIRGINIA 23220

A-H-ROBINS

## Help us to serve you better.....

If your mailing label does not contain your zip code, note it on the label and return it to us for correction.

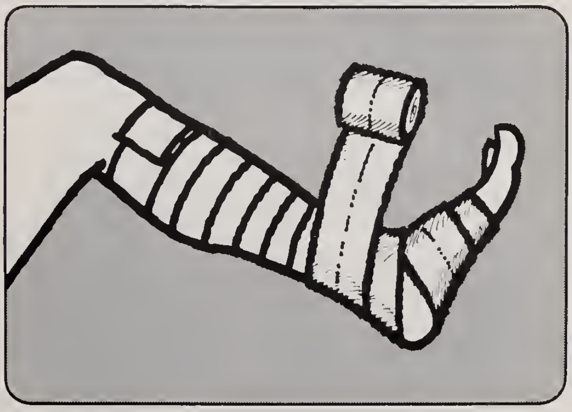
Remember, your Zip Code provides faster, more direct delivery of your journals. Use it on all correspondence, too.



**PRIMER®**

*PLUS*

**Flexoplast®**



**A practical, ambulatory treatment for leg ulceration**

**The Flexible Cast:** The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

**EDWARD TAYLOR Ltd.**
A Division of Glenwood Laboratories Inc.
**Tenafly, New Jersey 07670**

Gentlemen:

Please send me
☐ literature
☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name .............................. M.D.
Address ..............................
City ..............................
State .................... Zip ..........

# They all have two things in common: they have monilial vaginitis;

**CANDEPTIN now gives you complete therapeutic flexibility.**

It is the specific high potency antimonilial agent which provides superior effectiveness. And there is at least one dosage form to meet every patient's individual needs and/or preference.

**CANDEPTIN — more advantages for your patients...**

**It's fast**—prompt symptomatic relief of itching, burning, candidiasis discharge and malodor in 48-72 hours; usually cures completely in a single 14-day course of therapy.

**It's safe**—no side effects, clinical reports of irritation or sensitization have been extremely rare; exact dosage can be assured.[5,6]

**It's convenient**—easy to use in all forms, encourages patient acceptance and cooperation; therapy can be started in your office.

**It's clinically proven**—Candicidin is significantly more potent in vitro than nystatin,[1] and has a record of cure rates of 90% and more in pregnant and non-pregnant patients.[2,3,4] In two recent studies, both involving gravid and non-gravid patients, a 100% culture-confirmed cure rate was achieved with 14 days of therapy.[5,6]

**CANDEPTIN (candicidin) Vaginal Tablets, Vaginal Ointment, and ... new VAGELETTES™**

Now Vagelettes offer a unique new dosage form—candicidin ointment in a soft gelatin capsule — for virtually unlimited application. With Candeptin in three forms, your range of therapy has been extended to meet even those previously difficult-to-treat Candida cases.

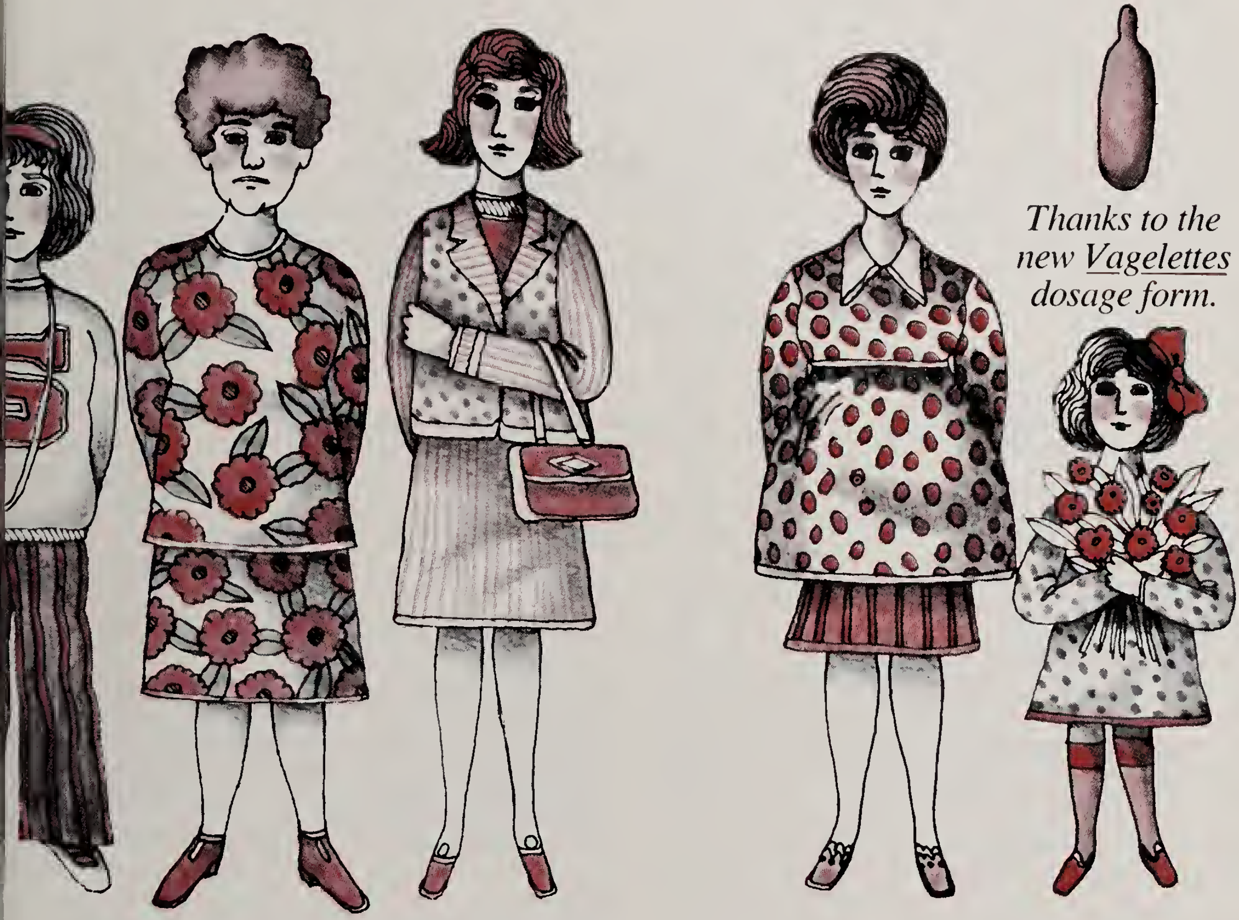
☐ For the young patient—cut off the tip of the narrow soft end of the Candeptin Vagelette and extrude contents through the intact hymen.

☐ For the gravid patient—easy manual insertion without the need for an applicator or inserter for intravaginal use.

☐ For the multiple needs of all your patients—topical application for labial involvement, intravaginal use to treat mucosal infestation.

**References:** 1. Lechevalier, H.: Antibiotics Annual 1959-1960. New York, Antibiotica Inc., 1960. pp. 614-618. 2. Olsen, J.R.: Journal-Lancet *85*:287 (July) 1965. 3. Giorlando, S.W., Torres, J.F., and Muscillo, G.: Am. J. Obst. & Gynec. *90*:370 (Oct. 1) 1964. 4. Friedel, H.J.: Maryland M.J., *15*:36 (Feb.) 1966. 5. Giorlando, S.W.: to be published 1971. 6. Decker, A.: Case Reports on File, Medical Department, Julius Schmid.

ey can now be **cured with Candeptin.** Even these two.



*Thanks to the new Vagelettes dosage form.*

**NDEPTIN®**
ıdicidin Vaginal Tablets, Ointment, VAGELETTES™
**ıcription:** Candeptin (candicidin) Vaginal Ointment contains
ispersion of candicidin powder equivalent to 0.6 mg. per gm.
).06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Can-
din is contained in 5 gm. of ointment or one applicatorful.
ıdeptin Vaginal Tablets contain Candicidin powder equiva-
t to 3 mg. (0.3%) Candicidin activity dispersed in starch,
ose and magnesium stearate. Candeptin Vagelettes contain 3
. of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.
**ion:** Candeptin Vaginal Ointment, Vaginal Tablets and Vagel-
s possess anti-monilial activity.
**ications:** Vaginitis due to *Candida albicans* and other candida
cies.
**ntraindications:** Contraindicated for patients known to be
sitive to any of its components. During pregnancy manual
blet or Vagelette insertion may be preferred since the use of
ointment applicator or tablet inserter may be contraindicated.
**ıtion:** During treatment it is recommended that the patient re-
n from sexual intercourse or the husband wear a condom to
ıid re-infection.
**verse Reaction:** Clinical reports of sensitization or temporary
tation with Candeptin Vaginal Ointment, Vaginal Tablets or
gelettes have been extremely rare.
**sage:** One vaginal applicatorful of Candeptin Ointment or
Vaginal Tablet or one Vagelette is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

**Available Dosage Forms:** Candeptin Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). Candeptin Vaginal Tablets are packaged in boxes of 28, in foil with inserter — enough for a full course of treatment. Candeptin Vagelettes are packaged in boxes of 14. (14-day regimen requires 2 boxes).

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

**Candeptin®**
**(candicidin)** Vaginal Tablets/Ointment,
VAGELETTES™ Vaginal Capsules
*depend on it as your agent of first choice*

Innovators in Candicidin Therapy
**Julius Schmid Pharmaceuticals**
423 West 55th Street
New York, New York 10019

# INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

Page

**Bank**
- Riggs National Bank . . 2

**Business Counseling**
- Data Medics . . . T-266

**Collection Agency**
- Capital Credit Corporation . . . T-296

**Diatetic Products**
- Campbell Soup Company . . . T-259

**Insurance**
- Mcdermott Insurance, Inc. . . . T-293
- Mutual of Omaha . . . 3-C

**Equipment and Supplies**
- Kloman Surgical Supply Company . . . T-295

**Investment Planning**
- Eugene F. Roesser . . . T-277
- Russell, Marsh, & Kennedy . . . T-266
- Suter Association Retirement Planning . . . T-296

**Nurse Registries** . . . T-287
- Association of Undergraduate and Practical Nurse Registry . . . T-287
- Capital Nurse Registry . . . T-292
- District of Columbia Manpower Administration . . . T-278

T-text

Page

**Pharmaceuticals**
- Arch Laboratories . . . T-392
- Burroughs-Wellcome . . . T-261
- Burton-Parsons . . . T-276
- C. B. Fleet Company, Inc. . . . T-255
- Geigy Pharmaceuticals . . . 4
- Eli Lilly & Company . . . 6
- Merck, Sharp & Dohme . . . T-290–291
- National Drug Company . . . T-253, 254, 13, 14
- Wm. P. Poythress . . . T-279
- Riker Laboratories . . . T-287

**Roche Laboratories** . . . 2-C-1, 4-C
- A. H. Robins Company . . . 7, 8
- Julius Schmid, Inc. . . . 10–11
- G. D. Searle . . . T-256–257
- Smith, Kline & French . . . T-280
- E. R. Squibb & Sons . . . T-262
- Edward Taylor, Limited . . . 9
- The Upjohn Company . . . T-260

**Pharmacies**
- Maxwell & Tennyson . . . T-266
- Peoples Drug Stores . . . T-263

**Recording Services**
- Richard O. Repplier . . . T-288

**Sanitariums**
- Kalorama Convalescent Home . . . T-293

**Vacation & Recreation**
- Boar's Head Inn . . . T-282

MEDICAL ANNALS
of the District of Columbia

*April 1971*

VOLUME 40 • NUMBER 4

GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER NUMBER

This is the first in a seventh series of special numbers of the MEDICAL ANNALS, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan area. For the GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER NUMBER the Editorial Board is indebted to Dr. Thomas M. Peery, Chairman, Department of Pathology, George Washington University Medical Center, who secured the papers which appear in this issue.

# Diagnostic Usefulness of Rectal Biopsy

WILLIAM O. DOBBINS, III, M.D.*

BIOPSY OF RECTAL and sigmoid tumors under direct visualization through a sigmoidoscope is a well-established method for the documentation or exclusion of malignant growths. However, the great variety of other indications and uses of rectal biopsy are not so well appreciated. This review emphasizes these indications and outlines the histopathological features seen in a variety of diseases in which rectal biopsy is performed.[1]

There are few diseases involving the rectum in which histopathological evidence can be considered pathognomonic. Thus, evidence obtained by rectal biopsy must be evaluated in the light of history, physical examination, sigmoidoscopy, roentgen studies, and other appropriate testing. Four types of rectal biopsy instruments are commonly used: cutting forceps, punch biopsy forceps, snares, and suction biopsy instruments. Discreet lesions should be sampled by cutting or punch biopsy forceps under direct visualization while polyps on a well-defined stalk may be removed by a snare. Rectal suction biopsy may be utilized to obtain information concerning diffuse disease of the rectum and systemic diseases known to involve the rectum. Suction biopsies of the rectum with the instrument described by Rubin[2-4] may be obtained without sigmoidoscopy and with little or no discomfort to the patient. The procedure is painless, and minimal bleeding follows excision of the biopsies. Cleansing enemas are not necessary prior to the biopsy.

In order to obtain maximum information from a biopsy it is important that the specimen be gently flattened and serially sectioned with the sections parallel to the crypts.[3] The histology of normal rectal biopsy specimens is illustrated in figure 1. The surface epithelium consists of a single layer of columnar cells and mucus-producing goblet cells. Closely packed, parallel, straight tubular glands (the crypts of Lieberkühn) punctuate the mucosa. The epithelium of the crypts is continuous with the surface epithelium and consists of a single layer of mucous goblet cells. Mitoses are found at the base of crypts, and occasional argentaffin cells are located in the crypts. The surface epithelium and crypts are supported by connective tissue of the lamina propria, which contains capillaries, nerve fibers, lymphocytes, plasma cells, macrophages, fibroblasts, and occasional eosinophils. Occasional neutrophils may be seen. Often, normal biopsies contain large lymph follicles, and these are usually of no diagnostic significance. The glands of the rectum (crypts of Lieberkühn) tend to be less regular and poorly organized in the lower portion of the rectum, and hence it is preferable to obtain most rectal biopsies 7 to 10 cm proximal to the anus.

Diffuse rectal diseases in which suction biopsies may be of diagnostic value are listed as follows:

*Amebiasis.* This diagnosis often depends on the identification of *Entamoeba histolytica* in the stool or in rectal biopsies. Biopsy may occassionally

---

* Director, Division of Gastroenterology; Associate Professor of Medicine, George Washington University Medical Center, Washington, D. C. 20037.

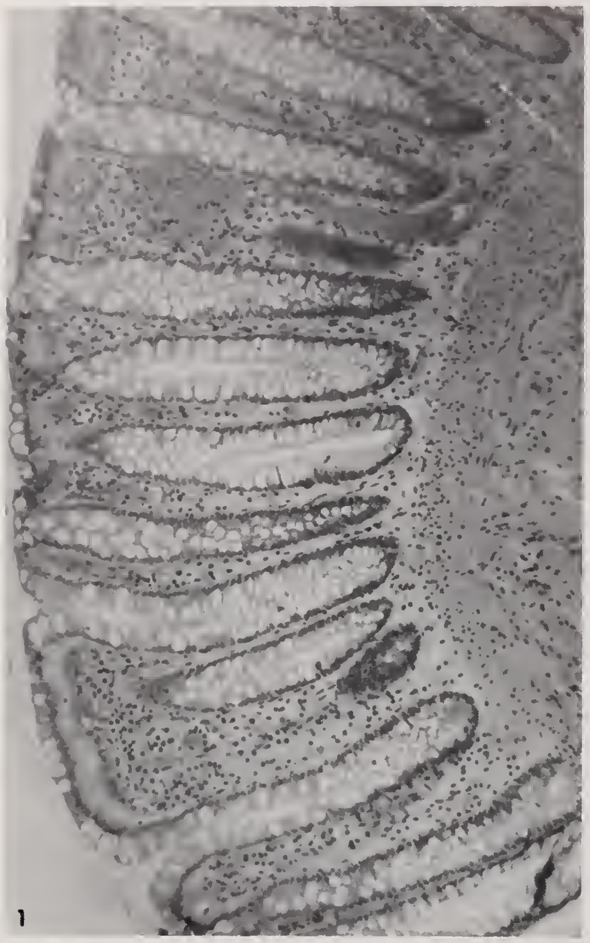


**FIG. 1. Light microscopic photograph of normal human colonic mucosa illustrating the parallel arrangement of crypts of Lieberkühn. The epithelium along the crypts predominantly consists of goblet cells and columnar cells. There are modest numbers of plasma cells, lymphocytes, macrophages, and mast cells in the lamina propria. The muscularis mucosae is well developed.**

establish the diagnosis of amebiasis when repeated stool examinations have failed to do so. The biopsy should be taken from ulcerations, though biopsy of the apparently normal rectal mucosa may reveal typical amoebic trophozoites. The diagnosis is suggested by the finding of large round mononuclear cells measuring 14 to 30 microns, occasionally with projecting pseudopods and containing ingested erythrocytes. The cytoplasm is pink or purplish with a foamy vacuolated appearance, and the nuclear structure may be typical for *E. histolytica.*[1,5]

*Amyloidosis.* Rectal biopsy may be the most efficacious procedure in establishing this diagnosis. The ease of biopsy, the absence of serious complications, and the 75% incidence of positive rectal biopsies establish it as the screening procedure of choice in patients with suspected amyloidosis. The biopsy tissue, when sectioned, should be stained with Congo Red and then examined by polarized light. The presence of green birefringence is considered to be specific for amyloid. Amyloid deposits are most frequently found in the walls of submucosal vessels and in the muscularus mucosae. The mucosa may be involved, but this is rare and thus adequate biopsy specimens must contain submucosa. Ample amounts of submucosa are obtained in most suction biopsy specimens.[1] Occasionally a punch biopsy of a rectal valve may be necessary in order to obtain sufficient tissue.

*Crohn's disease.* Rectal biopsy may aid in the distinction between Crohn's disease of the colon and chronic ulcerative colitis. Histological features in rectal biopsies suggestive of Crohn's disease are a pronounced submucosal and lymphocytic infiltrate, with only non-specific inflammatory changes in the mucosa. Lymphoid hypoplasia may be conspicuous. The presence of numerous epitheloid and giant cells scattered through the submucosa or mucosa supports and diagnosis. However, the absence of granulomas in rectal biopsy specimens does not exclude Crohn's disease. Further, it should be kept in mind that granulomas in rectal biopsies may also be seen in a wide variety of other conditions including bacterial infection, amebiasis, schistosomiasis, foreign-body reaction, and occasionally in ulcerative colitis. Ordinarily, the biopsy should be obtained from areas of mucosa that appear to be diseased. However, occasional granulomas have been found in tissues taken from otherwise normal-appearing mucosa.

*Cystic fibrosis.* The rectal mucosa in patients with cystic fibrosis often shows the presence of widely dilated crypts packed with mucus, gaping crypt mouths, and very prominent tall goblet cells. Even so, rectal biopsy is not likely to be of diagnostic value in this disease.[1]

*Endometriosis.* Endometriosis of the rectum may be mistaken for carcinoma. However, only rarely will rectal biopsy demonstrate endometriosis, since involvement of the mucosa is less frequent than involvement of the muscularis and serosa. Biopsy should be attempted since occasionally unnecessary surgery may be prevented by demonstrated of typical endometrial glands involving the submucosa.

*Hirschsprung's disease.* This disease, characterized by colonic obstruction in the pediatric age group, may occasionally occur in adults. Histologically there is absence of ganglion cells and the presence of hypertrophied nerve fibers in the submucosal and intermuscular layers of narrowed colonic segment.

While barium enema characteristically shows a narrowed distal segment and a dilated proximal colon, reliance cannot be placed on this examination alone. A pre-operative rectal biopsy is important in order to establish this diagnosis before undertaking surgical correction. The aganglionic segment nearly always includes the rectum and includes both the submucosal (Meissner) and intermuscular (Auerbach) plexuses. Thus, serially sectioned rectal suction biopsies have been shown to establish the presence or absence of ganglion cells.[4] Surgically obtained biopsy specimens that include the muscularis as well as the submucosa are not necessary in order to diagnose or exclude Hirschsprung's disease. Rectal suction biopsies do not require anesthesia, sedation, bowel preps, or sigmoidoscopy.

*Irradiation proctitis.* Symptoms of this disorder may appear years after a course of radiation therapy. Induration, ulceration or stricture may suggest carcinoma. Biopsy of the lesion is helpful in the differential diagnosis in the irradiation proctitis demonstrates prominent submucosal fibrosis and obliterative vasculitis with varying degrees of mucosal atrophy and distortion. Biopsy is rarely needed to support the diagnosis of acute irradiation proctitis because of the temporal relationship to therapy. However, rectal biopsies in acute irradiation proctitis may reveal focal eosinophilic crypt abscesses.[6] Histological abnormalities related to the use of chemotherapeutic agents such as 5-fluorouracil have been described.

*Melanosis coli.* This is a benign pigmentation of rectal mucosa seen in patients addicted to anthraquinone laxatives. Sigmoidoscopically the rectal mucosa appears brown or even black, and biopsy shows pigment granules in macrophages of the lamina propria and submucosa. These macrophages are PAS positive as are virtually all macrophages found in the rectum.

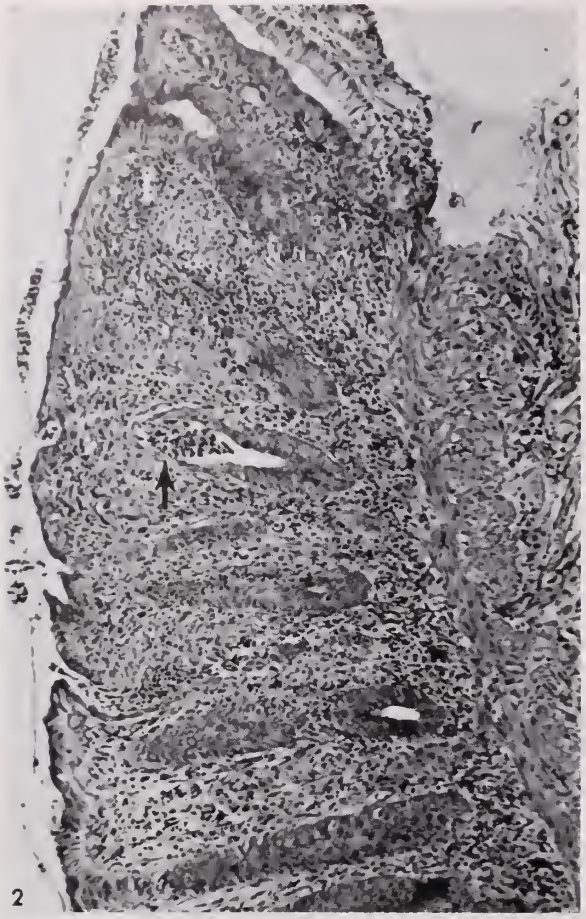
*Neurolipidoses.* In neuronal storage disease, neurolipid storage occurs in neurons of the central nervous system and in peripheral ganglia including the submucosal myenteric plexus. Rectal biopsies may demonstrate balloned ganglion cells filled with foamy cytoplasm. Similarly, in some visceral storage diseases foamy histocytes may be demonstrated in rectal specimens. Rectal biopsy is rarely of major clinical usefulness in most of these diseases. However, in Tay-Sach's disease rectal biopsy is of particular value in early diagnosis.[7]

*Schistosomiasis.* The rectal mucosa is a site of great concentration of *Schistosoma mansoni* and *Schistosoma japonicum* eggs. Thus, rectal biopsy is an excellent method of establishing the diagnosis of these diseases by means of the transparency technique.[8]

Further, rectal biopsy may aid in the diagnosis of *Schistosoma haemadobium* infestation in which urine and stool examinations may be negative for ova. The transparency technique is the preferred method because it permits determination of viability of the ova and quantitative egg-counting. The biopsy specimen is immersed in saline for a few minutes to improve transparency, and the tissue is then placed between 2 glass slides and flattened until translucent. The eggs are oval, with a characteristic location of the spine for each species.[1]

*Submucosal cysts and glands.* Colitis cystica profunda is established by demonstrating the presence of benign mucous glands and cysts lined with normal-appearing epithelium in the submucosa of the rectum. These benign cysts may be confused with adenocarcinoma and are occasionally an incidental finding in ulcerative colitis and other inflammatory diseases of the colon. Pneumatosis intestinalis may involve the rectum and sigmoid colon and is characterized by the presence of subserosal and submucosal emphysematous blebs. Collapse of these cysts at the time of biopsy supports the diagnosis.

*Ulcerative colitis.* Rectal biopsy is not necessary to provide histological confirmation of ulcerative colitis when the classical clinical and sigmoidoscopic features are present in the absence of pathogenic bacteria or parasites in the feces. However, it is indicated when these features are equivocal and is often of assistence in the distinction of ulcerative colitis from parasitic and bacterial diseases. It must be emphasized that the pathological changes in rectal biopsies in ulcerative colitis are not pathognomonic and may occur in other inflammatory diseases of the colon. Rectal biopsy is more sensitive than barium enema or sigmoidoscopy in the detection of early or quiescent ulcerative colitis and in assessing activity. Morever, serial rectal biopsies may provide the most reliable guide to effective therapy.[9] The hallmark of active disease in the presence of polymorphonuclear leukocytes infiltrating the lamina propria with or without microabscesses of the lamina propria and crypts (figure 2). In addition to polymorphonuclear leukocytes the lamina propria is infiltrated with plasma cells and lymphocytes while eosinophils and mast cells may be increased. Macrophages tend to be absent. Goblet cells of the surface and crypt epithelium tend to be devoid of their mucus and are elongate in appearance. Erosions and ulcerations of the surface and crypt epithelium may be seen in patients with severe inflammation. Often the luminal surface is partially denuded of epithelium in a patchy distribution. Because the colonic mucosa is in quiescent ulcerative colitis only occasionally returns to normal, biopsy findings in conjunction with clinical assessment can help to refute or support a previous diagnosis of ulcerative colitis.[10]



2

FIG. 2. Light photomicrograph of portion of rectal suction biopsy in a patient with ulcerative colitis. The surface epithelium tends to be flattened and infiltrated by PMN's. Numerous PMN's can be seen free in the lumen. Most of the goblet cells in the crypts are emptied of their mucus content. The lamina propria is infiltrated with PMN's, lymphocytes, and plasma cells, and a crypt abscess is quite apparent (arrow).

Recently, yearly rectal biopsies have been advocated in an effort to detect the pre-cancerous phase of the disease.[11] If this recommendation can be verified by other investigators, then yearly rectal biopsy in conjunction with other methods of examination should define those patients who are best treated by total colectomy in order to prevent carcinoma.

*Whipple's disease.* The diagnosis of Whipple's disease is best established by peroral small-bowel biopsy. Characteristically the lamina propria of the intestinal villus is packed with PAS-positive macrophages. This is not true for the lamina propria of the rectum and colon. It has been shown that colonic histiocytosis is unrelated to Whipple's disease, and the presence of PAS-positive macrophages in the lamina propria of rectal mucosa cannot be considered diagnostic of Whipple's disease.[12] When PAS staining is performed routinely on all rectal biopsy specimens, clearly identifiable PAS-positive macrophages in the lamina propria can be shown to be present in the majority of otherwise normal specimens.[11] Thus, in Whipple's disease the rectal mucosa does not show characteristic biopsy changes, in contrast with the small intestinal mucosa.

*Miscellaneous.* Rectal biopsy may be of benefit in a wide variety of other diseases, both systemic and those confined to the rectum. Such diseases include agammaglobulinemia, vasculitis, histoplasmosis of the rectum, ceroid-storage disease, anorectal tuberculosis, lymphogranuloma venereum, and gastric heterotopia of the rectal mucosa.[1]

## Summary

Rectal biopsy is indicated to determine the histological character of rectal neoplasms, masses, inflammatory diseases, ulcers, and strictures. It may establish a diagnosis of amebiasis, amyloidosis, Hirschprung's disease, and schistosomiasis when other diagnostic procedures have failed. Rectal biopsy, although non-specific, is an important procedure in the diagnosis of ulcerative colitis and Crohn's disease of the colon. It may be of value in the diagnosis of cystic fibrosis and in a variety of neurolipid storage diseases. Rectal biopsy cannot be used to establish the diagnosis of Whipple's disease.

## References

1. GEAR, E. V., JR., AND DOBBINS, W. O., III.: Gastroenterology, 1968, 55, 522.
2. BRANDBORG, L. L., RUBIN, C. E., AND QUINTON, W. E.: Gastroenterology, 1959, 37, 1.
3. FLICK, A. L., VOEGTLIN, K. F., AND RUBIN, C. E.: Gastroenterology, 1962, 42, 691.
4. DOBBINS, W. O., III, AND BILL, A. H., FR.: New Eng. J. Med., 1965, 272, 990.
5. JUNIPER, K., JR.: Amer. J. Med., 1962, 33, 377.
6. GELFAND, M. D., ET AL: Gastroenterology, 1968, 54, 401.
7. BODIAN, M., AND LAKE, B. D.: Brit. J. Surg., 1963, 50, 702.
8. HERNANDEZ-MORALES, F., AND MALDONADO, J. F.: Amer. J. Trop. Med., 1946, 26, 811.
9. SPIRO, H. M.: Amer. J. Dig. Dis., 1960. 5, 548.
10. MATTS, S. G. F.: Quart. J. Med., 1961, 30, 393.
11. MORSON, B. C., AND PANG, L. S. C.: Gut, 1967, 8, 423.
12. PITTMAN, F. E., ET AL: Gut, 1966, 7, 458.

# Familial Systemic Lupus Erythematosus*

FERNANDO A. SALAZAR, M.D.,† DOUGLAS N. ROBBINS, M.D.†
AND RAYMOND SCALETTAR, M.D., F.A.C.P.‡

CLINICAL SYSTEMIC LUPUS erythematosus was diagnosed in 3 members of a Negro family. Two patients are living in remission on steroid therapy; a third had disseminated arteritis at autopsy. Thirty-two additional asymptomatic first-degree relatives distributed in 4 generations with a mean age of 13.5 years of age were available for study. There was hypergammaglobulinemia ($>1.60$ gm/100 ml) in 22 of the 32 with representatives from each generation. Two members (ages 5 and 21 years) had positive latex fixation tests for rheumatoid factor, and an 8-year-old girl had a positive direct Coombs test. It is suggested that this family has genetically altered immune responsiveness. The true potential for collagen vascular disease in the family requires sequential prospective study.

The occurrence of systemic lupus erythematosus (SLE) in more than 1 member of the same family is unusual. Until 1966 there were 27 complete reports and 19 incomplete reports of familial SLE. Of these, 40 were of 2 members of the same family, 5 were of 3 members of the same family, and 1 report involved 4 members of the same family.[1, 2]

Also, a number of studies have shown an increased incidence of various clinical and laboratory abnormalities among families of patients with SLE[3-5], and this has been an important point in suggesting genetic predisposing factors in the etiology of this disease.

This paper reports first a family having 2 members with SLE and a third member with disseminated arteritis, and secondly the results of the clinical and laboratory investigations of other members of this family.

## Report of Cases

**Case 1.** A 40-year-old Negro woman was admitted to the Washington Hospital Center in April, 1968 with a history of generalized edema and hypertension of 4 months' duration. She appeared chronically ill with a blood pressure of 170/90 mm Hg, periorbital and facial edema, generalized lymphadenopathy, a grade II/VI systolic basal and apical murmurs, and 4+ pitting edema in the lower extremities. Laboratory examination showed: hemoglobin, 7.8 gm/100 ml; hematocrit, 23.5%; blood urea nitrogen, 35 mg/100 ml; cholesterol, 119 mg/100 ml; reticulocytes, 1.8%; direct Coombs tests, weakly reactive; indirect Coombs test, negative; serum complement, 38 mg/100 ml; haptoglobin, 221.5 mg/100 ml; multiple L.E. preps, positive; serum protein electrophoresis, albumin, 1.62 gm/100 ml and gamma globulin, 3.28 gm/100 ml; serum immuno-electrophoresis, a marked increase in IgG fraction; the other immunoglobulins, normal; urine sediment, erythrocyturia and leukocyturia and numerous granular casts; urine protein, 8.6 gm/24 hours. Kidney biopsy was compatible with lupus nephritis. The patient was started on Prednisone 60 mg/day which was later increased to 80 mg/day. After 6 weeks of therapy there was no improvement in the nephrotic syndrome. Azathioprine (Imuran), 150 mg/day, was added, and the nephrotic syndrome remitted in 3 months. At present the patient is doing well and is being maintained on low doses of alternate-day Prednisone therapy and Azathioprine.

**Case 2.** A 22-year-old Negro woman (niece of Case 1) was admitted to the Washington Hospital Center in July 1969 with a year's history of polyarthralgia. She had an erythematous, papular eruption in a butterfly distribution over the malar area of her face, as well as cervical lymphadenopathy. No arthropathy or synovial effusions were present. Laboratory data showed: hemoglobin, 7.8 gm/100 ml; hematocrit, 24%; platelets, 107,500; blood urea nitrogen, 11 mg/100 ml; cholesterol, 251 mg/100 ml; multiple L.E. preps, positive; antinuclear antibody, positive; direct Coombs test, positive; indirect Coombs test, negative; serum complement, 45 mg/100 ml; serum protein electrophoresis, albumin, 2.90 gm/100 ml, gamma globulin, 2.60 gm/100 ml; qualitative immuno-electrophoresis, increased IgG; proteinuria, 1.45 gm/24 hours; X-ray films of the hands and knees were normal. The patient was initially treated with Prednisone, 60 mg/day, and with improvement of her joint complaints and proteinuria this has been tapered to 15 mg/day.

---

* Supported through funds provided by the Arthritis and Rheumatism Association of Metropolitan Washington.

† From the Department of Medicine, Washington Hospital Center, Washington, D.C. 20010.

‡ Chief, Rheumatic Disease Section of the Washington Hospital Center, Clinical Assistant Professor of Medicine at the George Washington University School of Medicine.

Requests for reprints should be addressed to Dr. Scalettar, Department of Medicine, Washington Hospital Center, 110 Irving Street, N.W., Washington, D.C. 20010.

Case 3. A 27-year-old Negro woman (sister of Case 1, mother of Case 2) entered the Georgetown University Hospital in September 1959 with symptoms of fatigue, weight loss, pain and swelling of both knees and ankles, dyspnea, chest pain, and hemoptysis. She had had splenectomy 4 years prior to admission to relieve a bleeding tendency diagnosed as idopathic thrombocytopenic purpura. The laboratory tests revealed anemia, thrombocytopenia, leukocytosis, negative L.E. preps, albuminuria, and a steadily rising blood urea nitrogen. The patient died 4 weeks after admission after continuing to have respiratory distress and progressive hypotension. Necropsy findings revealed disseminated arteritis with multiple infarctions of the lungs, liver, adrenal glands, and kidneys.

## Materials and Methods

The family pedigree is presented in figure 1. Thirty-two of the 40 members (17 males and 15 females), whose mean age was 13½ years with a range of 20 months to 60 years, were available for study, which consisted of a complete history and physical examination as well as the following laboratory procedures: lupus erythematosus preparation (L.E. prep), antinuclear antibody, VDRL (Veneral Disease Research Laboratory), rheumatoid factor (latex fixation and sensitized sheep-cell agglutination), direct Coombs test, serum-protein electrophoresis (cellulose acetate), qualitative immuno-electrophoresis, complete blood count, blood urea nitrogen, and urinalysis. All the laboratory tests were performed at the Clinical Pathology Laboratory of the Washington Hospital Center.

## Results

One adult relative, the mother of Case 1 and Case 3, had had occasional morning stiffness of her hands and knees for 20 years. Two other adult relatives in the second generation complained of occasional shoulder pain, but no evidence of joint abnormalities could be found. Except for tonsillar hyperplasia in 20 (62%) of the relatives in the third and fourth generation, physical examinations were unremarkable.

The complete blood counts, urinalyses, and blood urea nitrogen levels were all within normal limits, and the L. E. preps, antinuclear antibodies, and VDRL's were all negative. Two relatives (6%) in the third generation, aged 21 and 5 years, had positive latex fixation tests for the rheumatoid factor but negative sensitized sheep-cell agglutination titers, and an 8-year-old relative in the third generation had a positive direct Coombs test (figure 1).

The results of the serum protein electrophoresis showed a mean gamma globulin of 1.57 gm, 100 ml, with a range of 0.88-2.39 gm/100 ml (figure 2). The other globulin fractions as well as the albumin were essentially within the normal range. The results of

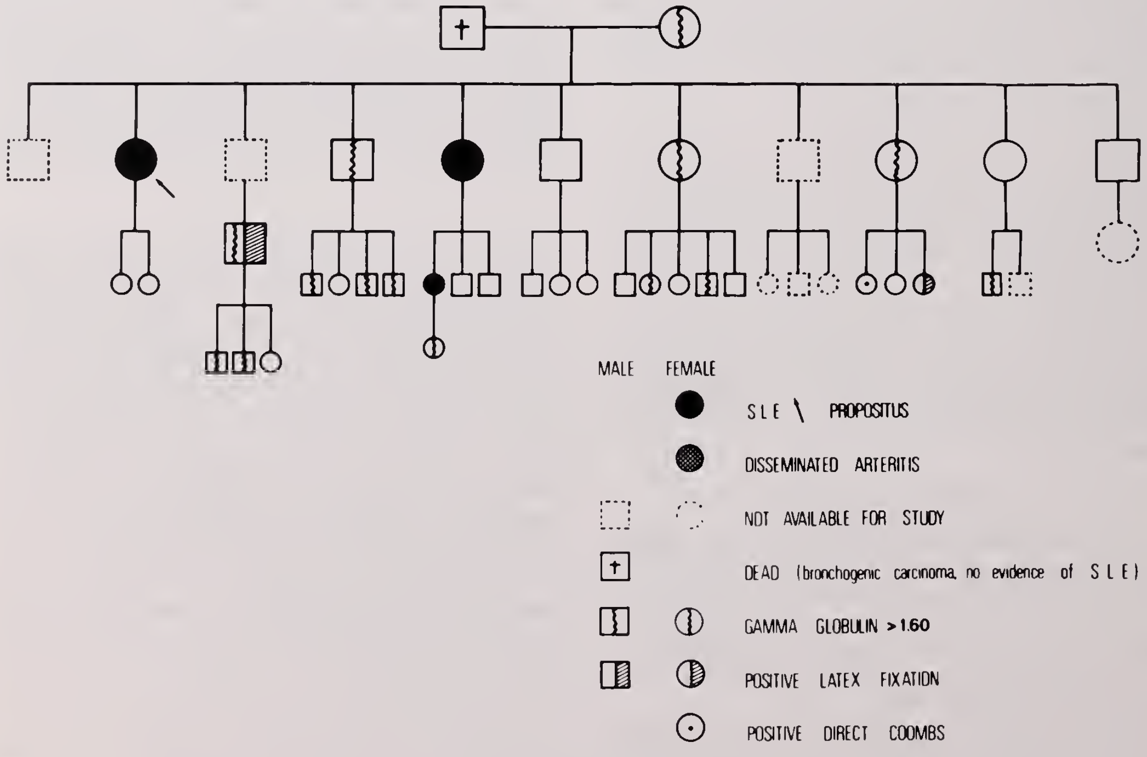


FIG. 1. Family pedigree.

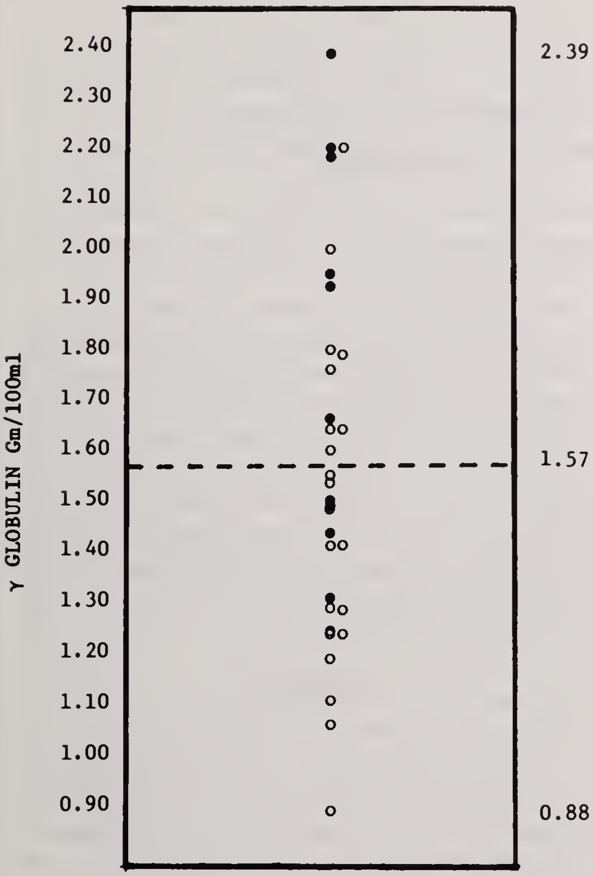


**FIG. 2. Serum γ globulin in 32 asymptomatic first-degree relatives of the patients with clinical SLE. ○ 1–12 years; ● over 12 years.**

qualitative immuno-electrophoresis showed 4 relatives with a moderate to large increase in the IgG fraction among the hypergammaglobulinemic population.

## Discussion

Both Case 1 and Case 2 represent many of the typical clinical and laboratory features of SLE. The kidney disease accompanied by the nephrotic syndrome was the major problem in Case 1, but the hematological system was also involved as evidenced by the severe anemia. Patient no. 2 also had a severe anemia as well as thrombocytopenia and kidney disease and much more involvement of the joints and the skin. Both patients had positive L.E. preps and antinuclear antibodies as well as hypoalbuminemia and hypergammaglobulinemia, and both have so far responded well to therapy. Case 3 is more unusual. Prior to death the clinical diagnosis had been SLE. After postmortem examination the diagnosis was thought to be probably disseminated arteritis because of negative L.E. preps and the absence of typical renal, endocardial, and cutaneous lesions. The pathological changes in the arteries, which showed proliferation of the intima and obliteration of the lumen, were thought to be similar to those seen in healed polyarteritis nodosa. In addition, idiopathic thrombocytopenic purpura, which was first diagnosed 4 years prior to death, is an interesting additional finding since it is frequently seen during SLE, or as a premonitory sign before the disease can be positively established. This case would appear to be a variant of SLE or at least a collagen vascular disease with disseminated arteritis.

The finding of mild, non-specific arthralgia in 3 otherwise healthy adults is a subjective finding and is probably not specific. Likewise, the finding of tonsillar hyperplasia in 20 (62%) of the relatives is not unusual since this occurrence was primarily in children.

The serum-protein electrophoresis in the asymptomatic relatives suggested an increased gamma globulin with a mean of 1.57 gm/100 ml as compared with a range of 0.5–1.6 gm/100 ml in the normal population.[6] Lacking matched controls this is somewhat difficult to evaluate due to variabilities of technique, race, sex, and age, but, nevertheless, the family appears to have a diffuse type of hypergammaglobulinemia which is a pattern generally found in most collagen diseases. This is particularly important since hypergammaglobulinemia is almost always present in SLE, and it is one of the manifestations of an altered immune system which is thought to be an underlying mechanism in the pathogenesis of SLE.[7] Although gamma globulin values have been shown to be higher in Negroes, regardless of the socio-economic factors,[8] the increase in gamma globulin may at least partly reflect the higher incidence of SLE in this race.[2]

Furthermore, Leonhardt and Siegel et al[2,9] have suggested that families of patients with SLE can be divided into 2 populations, one having normal circulating values of gamma globulin and the other hypergammaglobulinemia. This was true in our population also, since 14 members (44%) had gamma globulin levels above 1.6 gm/100 ml including 5 members (16%) above 2.0 gm/100 ml, whereas 18 members (56%) had gamma globulin levels within the normal range. This is particularly significant, since in a comparative study of relatives of patients with rheumatoid arthritis, a closely related disorder with many overlapping clinical and laboratory abnormalities, Siegel et al[9] found that almost all the family members had normal gamma globulin levels, and he postulated that this may be an important differentiating factor in the pathogenesis of these 2 diseases.

Immunoelectrophoresis was done qualitatively in our study and is recorded as either normal, slight, or moderate to large increases in the IgG, IgA, or IgM fractions. Several studies[11, 12] have shown a significant increase of IgG in patients with SLE, and 2 patients in this study had large increases in the IgG fraction. It is of further interest that in this family 4 asymptomatic members (13%) had a moderate to large increase in the IgG fraction. Since increased IgG levels may be related to the clinical activity of the disease one might not expect increases in asymptomatic relatives.

Two asymptomatic relatives, aged 5 and 21 years (6%), had a positive latex fixation test for the rheumatoid factor but negative sheep-cell agglutination titer. This may be significant since the reported incidence of a positive latex fixation test by Waller et al[10] for a normal population below the age of 29 is 3.6%. Conversely, the single direct Coombs positivity test in an 8-year-old girl could more likely have occurred by chance, but the test requires repeating at appropriate intervals to be sure.

It was of interest that none of the relatives had positive antinuclear antibody titer, although patients no. 1 and no. 2 did have positive titers. This is comparable to the findings of Pollak[5] who studied 43 families of patients with SLE and found 25 families with at least 1 relative having a positive antinuclear antibody titer, but they also found 18 families with no relatives having a positive titer.

In our study 22 (69%) of the subjects were below the age of 12 years, whereas the collagen vascular diseases are not usually manifest until well into the second decade of life. Therefore, the fact that all the subjects examined were in good health may not indicate the true potential for collagen vascular disease in this family.

Systemic lupus erythematosus is a complex multisystem disease thought to be due to an altered immunological system, and the findings from our study and from other studies would suggest that this alteration is genetically influenced in many cases. Environmental factors, such as drugs,[13] exposure to sunlight, and infections[7] have been associated with the onset and exacerbation of SLE. Further understanding of the relationship between the genetically altered immunological system and environmental factors will be needed in order to further elucidate the pathogenesis of this disease.

It is important to note that in the extensive family studies that have been reported[3, 4] there is a marked disproportion between the small number of patients with SLE and the relatively large number of their asymptomatic relatives who have at least laboratory evidence of an altered immunological system. Whether this may be due to partial genetic penetrance is difficult to determine, but certainly more studies are needed in order to determine the true potential for disease in these families.

## References

1. BRUNJES, S., ZIKE, K., AND JULIAN R.: Amer. J. Med., 1961, 30, 529.
2. LEONHARDT, T.: Clin. Exper. Immun., 1967, 2, 743.
3. SIEGEL, M. ET AL: J. Chron. Dis., 1962, 15, 131.
4. LEONHARDT, T.: Acta, Med. Scand, Supplement, 1964, #416, 176.
5. POLLAK, V.: New Eng. J. Med., 1964, 271, 165.
6. DAVIDSON, L. AND HENRY, J.: Clinical Diagnosis by Laboratory Methods. Philadelphia: Saunders Co., 1969, p. 529.
7. HOLLANDER, J., EDITOR: Arthritis and Allied Conditions. Philadelphia: Lea and Febiger, 1966, p. 783.
8. LICHTMAN, M., VAUGHAN, J., AND HAMES, C.: Arth. & Rheum., 1967, 10, 204.
9. SIEGEL, M., ET AL: New Eng. J. Med., 1965, 273, 893.
10. WALLER, M., TOONE, E., AND VAUGHAN, E.: Arth. & Rheum., 1964, 7, 513.
11. CASS, R., ET AL: Ann. Intern. Med., 1968, 69, 749.
12. TOMASI, T. B., JR.: Blood, 1962, 5, 382,
13. LEE, S., RIVERO, I., AND SIEGEL, M.: Arch. Intern. Med., 1966, 117, 620.

# Electrical Reversion of Atrial Fibrillation
# Selection of Patients in 1971

JOSEPH LINDSAY, JR., M.D.†

ALMOST A DECADE has elapsed since Lown[1] demonstrated the greater effectiveness and safety of synchronized capacitor discharge ("cardioversion") over quinidine administration for the reversion of atrial fibrillation. A multitude of reports have appeared describing utilization of this method for the reversion of thousands of patients. The technique itself is well standardized in most institutions, but there remains disagreement regarding the proper selection of patients and the desirability of the use of quinidine in maintaining sinus rhythm once established. The management of the patient with atrial fibrillation, the most common chronic cardiac arrhythmia, thus remains a challenge.

This paper will briefly review both the disadvantages of atrial fibrillation, which may be obviated by the restoration of sinus rhythm, and the safety and effectiveness of cardioversion. Based on this review, guidelines for the selection of patients for reversion will be suggested.

### Disadvantages of Atrial Fibrillation

Atrial fibrillation may compromise cardiac function. Acceleration of the ventricular rate, which characteristically accompanies the untreated arrhythmia, is the major hemodynamic disadvantage. In patients with tight mitral stenosis, frequently victims of atrial fibrillation, diastolic filling may be so compromised by an uncontrolled ventricular response that life-threatening shock or pulmonary edema ensues. In a less dramatic way most patients with reduced cardiac reserve are adversely effected by extended periods of accelerated heart rate. Digitalization almost always produces adequate slowing of the resting ventricular rate, but inappropriate tachycardia often appears in response to exercise. It is likely that the improved hemodynamic response to exertion which can be observed following restoration of sinus rhythm results from a more physiologic rate response to the stress.[2]

On the other hand, it has been difficult following restoration of sinus rhythm consistently to demonstrate objective improvement in resting hemodynamic parameters of patients whose ventricular response had been well controlled with digitalis during atrial fibrillation. Resting cardiac output may rise or be unchanged.[2,3] Paradoxically, in rare instances serious decompensation occurs subsequent to the procedure.[4] It would appear that the booster pump-function of the atrium plays an important compensatory role in those patients exhibiting improved cardiac function following restoration of sinus rhythm. In the others, failure of cardiac output to increase may result in at least 2 situations. First, it may have been restored to normal by other cardiovascular reflexes despite the loss of atrial contraction, and second, it has been shown that restoration of the p-wave to the ECG does not always result in effective mechanical atrial systole.[5]

In support of these laboratory data is the experience of all physicians who have followed individual patients after cardioversion. Improved subjective cardiac performance frequently but not invariably results but can not be predicted with certainty.

The great frequency with which systemic embolization accompanies atrial fibrillation especially in the presence of mitral valve disease has repeatedly been documented. A cause and effect relationship is supported by circumstantial evidence. Restoration of sinus rhythm may be expected, therefore, to discourage atrial thrombous formation and embolization. This expectation has been difficult to demonstrate conclusively, but most authorities think that it is justified.[6, 7]

Palpitations consequent to atrial fibrillation are occasionally so distressing to a patient as to provide an indication for reversion.

### Digitalis and Electrical Reversion

With a few exceptions (notably, patients with thyrotoxicosis, acute pulmonary embolism, or far-advanced cardiac or pulmonary failure) digitalis administration slows the ventricular response to atrial fibrillation by its effect on atrioventricular conduction. Since restoration of sinus rhythm is rarely so urgent as to dictate immediate cardioversion, it is accepted practice to administer digitalis first. A few individuals with recent onset of the arrhythmia will revert on this therapy alone.

---

† Associate Professor of Medicine, George Washington University Medical Center, Washington, D. C. 20037

Digitalis, however, is a 2-edged sword when cardioversion is planned. In experimental animals the energy required for the production of ventricular arrhythmias by electrical shock is sharply reduced by digitalization.[8, 9] Clinical observations suggest that this also is true in man. Serious, even fatal ventricular arrhythmias have followed attempted cardioversion in patients with even mild digitalis excess. It is wise, therefore, to discontinue the administration of digoxin for 48-72 hours (longer for digitalis leaf or digitoxin) prior to countershock. Electrical reversion is to be avoided when electrocardiographic clues to digitalis toxicity (slow or regular ventricular response, A-V nodal escape, ectopic ventricular activity) are present.

The serious ventricular arrhythmias attendant upon the cardioversion of patients with digitalis excess have occurred at energy levels of 200 watt-seconds or more.[8] If the clinical situation dictates reversion despite the possibility of digitalis excess, initial attempts should be made at no more than 5 to 10 watt-seconds. The emergence of ectopic ventricular activity after such low-energy shocks heralds more serious difficulty at higher levels.

### Safety and Efficiency of Electrical Reversion

Electrical reversion results in the restoration of sinus rhythm in 75–95% of attempts.[1, 2, 6, 10] If the arrhythmia has been present for more than 5 years or if gross generalized cardiac or left atrial enlargement is present the success rate is compromised, but even then sinus rhythm can be anticipated in at least half.[4]

Serious complications of the procedure are less than 5%.[1, 2, 4, 10] A 1–2% incidence of systemic embolization is reported; about equal in frequency to that found when quinidine is employed for conversion. It has not been established that pre-revision anticoagulation provides protection against this complication.

Sustained ventricular arrhythmias have occurred subsequent to cardioversion in another 1–2% of cases. However, Lown[1] reported that almost all may be prevented by careful synchronization to ensure that the shock does not fall in the vulnerable period and by proper management of digitalis prior to reversion.

Cardiac decompensation of mild to severe degree has rarely followed cardioversion of atrial fibrillation.[4] It has been attributed to electrical injury of the myocardium or to peculiar hemodynamic patterns attendant upon the return of atrial activity.

### Duration of Normal Sinus Rhythm

Although sinus rhythm can be restored in almost all patients with atrial fibrillation, the number maintaining it for more than a short time is disappointing. Reviews of the past few years are more discouraging than the original reports. It now appears that no more than one-fourth can maintain sinus rhythm for 1 year.[11]

Certain groups of patients have a much greater chance of remaining in sinus rhythm. Prolonged sinus rhythm is most likely in patients whose arrhythmia had been present for 1 year or less. The severity of cardiac decompensation and the magnitude of cardiomegaly (or in the case of mitral valve disease, the left atrium) seem also to bear on this problem. The greater the abnormality, the greater the potential benefit and the poorer the outlook for extended duration of sinus rhythm.

### The Role of Quinidine

Experience from the era of quinidine reversion of atrial fibrillation suggested that sinus rhythm was not often maintained if quinidine were discontinued.[7] In view of this experience and despite a high incidence of unpleasant gastrointestinal side-effects and a small incidence of serious, even fatal, hematologic or cardiac toxicity,[12] most physicians in this country have followed the lead of Lown and have used this drug in an effort to prevent an early return to atrial fibrillation.

Intolerance to quinidine has been said to be a contraindication to reversion.[1, 2] On more critical analysis the administration of quinidine seems to improve only slightly chances for prolonged sinus rhythm[11, 13] and to be no more effective than procaineamide in this regard.[11] No drug regimen has been successful in preserving sinus rhythm for longer than 1 year in more than 25% of patients reverted.

The administration of 800–1,200 mg daily of the drug, a maintenance dose, prior to electrical reversion has variously been reported to be advantageous[12] or dangerous.[14] The return of sinus rhythm can be anticipated from such doses in 10% or more of patients before electrical reversion is undertaken.[10, 12] Lown's data suggest that the electrical energy required for reversion is reduced and that the risk of ventricular arrhythmia in the post-reversion period is diminished. These observations were not confirmed by Szekely and coworkers,[15] and Åberg[14] found that an increased rather than a decreased incidence of post-reversion ventricular arrhythmia attended the use of quinidine.

In summary, quinidine is a potentially toxic agent which probably serves to prolong sinus rhythm after cardioversion but seems considerably less beneficial than was formerly thought. There appears to be no reason to deny electrical reversion to patients who are intolerant to the drug, since procaineamide probably serves as well to prevent the return of the arrhythmia. Whether or not to administer it prior to cardioversion remains debated.

### Selection of Patients

Some patients with atrial fibrillation exhibit features which immediately suggest that reversion will be hazardous, or that sinus rhythm is not apt to be beneficial. Electrical reversion is rarely applicable under such circumstances. For example, it is hazardous in the presence of digitalis intoxication or of hypokalemia in a digitalized patient. Cardioversion should, therefore, be delayed until these factors are corrected.

Evidence of disease involving the A-V conduction system raises serious questions regarding the advisability of restoring sinus rhythm. The existance of complete heart block or of a normal or slow ventricular response to atrial fibrillation prior to digitalis suggests that the restoration of sinus rhythm is often not beneficial and that unstable rhythms may ensue.

By the same token, evidence of disordered impulse formation by the sinus node presages unstable atrial and junctional rhythms following cardioversion, and sinus rhythm is not apt to be maintained. Patients in this category include those with "sick sinus syndrome"[16] and with recurrent supraventricular tachycardia. Atrial fibrillation may, in these cases, be the most advantageous rhythm available.

In the absence of these contraindications, all patients with atrial fibrillation are potential candidates for cardioversion, but the poor outlook for prolonged maintenance of sinus rhythm prohibits universal application. The presence of atrial fibrillation for more than a year or the presence of considerable cardiac or left atrial enlargement predicts a particularly limited chance of maintaining sinus rhythm for an extended period. These factors are not contraindications to a trial of cardioversion if clear potential for relief of symptoms exists, but repeated attempts, if an early return to atrial fibrillation ensues, are not justified. Inability of the patient to maintain sinus rhythm for more than a few days or weeks on appropriate quinidine therapy indicates small likelihood of prolonged success on subsequent attempts.

As has been stated, the restoration of sinus rhythm may be an important means of improving cardiac function in patients with heart disease. When, therefore, evidence of a compromised circulatory state persists after adequate digitalis therapy, a strong indication for cardioversion is present. If deterioration of cardiac function can be attributed to the arrhythmia, the indication for reversion is doubly strong. Unfortunately, those who stand to benefit most from the restoration of sinus rhythm patients with large hearts and serious failure, are least apt to remain in sinus rhythm for prolonged periods. It should be noted, however, that the return of sinus rhythm for even a few weeks may produce improved compensation which persists despite the resumption atrial fibrillation.[11]

The prevention of pulmonary or systemic embolization by elimination of atrial fibrillation is desirable but should not be the sole indication for reversion in patients with factors suggesting a poor outlook for a prolonged period of sinus rhythm. The skeptic may question whether prevention of embolization alone is ever an adequate reason for the procedure. The evidence that embolization is prevented is not conclusive,[6, 7] and the yield in long-term sinus rhythm is small.

Patients with a history of systemic embolization belong in a special group. Even though the superiority of the restoration of sinus rhythm plus anticoagulation over anticoagulation alone has not been established at this time, it seems desirable to employ both therapeutic measures. Cardioversion is carried out only after several weeks of anticoagulation.

In summary, patients who, after appropriate digitalis therapy, manifest symptoms attributable directly to atrial fibrillation or to compromised cardiac function should undergo cardioversion unless a contraindication exists or it has been established that normal sinus rhythm can not be maintained for a profitable interval. At times improvement consequent to the restoration of sinus rhythm may be so striking as to dictate repeated reversion upon the reappearance of the arrhythmia.

In the absence of contraindications most patients who are asymptomatic following digitalization should have electrical reversion in the hope of reducing the risk of embolic phenomena by restoring sinus rhythm for a prolonged period. It is unreasonable to undertake this procedure on these grounds if the arrhythmia has been present for many years or if it has been demonstrated that sinus rhythm will persist only briefly.

In closing, it should be noted that cardioversion should not be carried out in incompletely treated hyperthyroidism or prior to planned cardiac surgery. Sinus rhythm seldom persists under these circumstances but may be expected to persist for a longer period following control of the thyrotoxicosis or following correction of a structural cardiac lesion at surgery.

## References

1. LOWN, B.: Brit. Heart J., 1967, 29, 469.
2. MORRIS, J. J., JR. ET AL: Ann. Intern. Med., 1966, 65, 216.
3. SCOTT, M. E., AND PATTERSON, G. C.: Brit. Heart J., 1969, 31, 87.
4. RESNEKOV, L., AND MCDONALD, L.: Brit. Heart J., 1968, 30, 786.
5. BRAUNWALD, E.: Amer. J. Med., 1964, 37, 665.
6. DUCHELL, R. A.: Med. Clin. N. Amer., 1966, 50, 117.
7. CRAMER, G.: ACTA. Med. Scand. Supplement # 490, 1968.
8. KLEIGER, R., AND LOWN, B.: Circulation, 1966, 33, 878.
9. SZEKELY, P., ET AL: Brit. Heart J., 1969, 31, 91.
10. HURST, J. W., ET AL: Amer. J. Med., 1964, 37, 728.
11. SZEKELY, P., SIDERIS, D. A., AND BATSON, G. A.: Brit. Heart J., 1970, 32, 741.
12. ROSSI, M., AND LOWN, B.: Amer. J. Card., 1967, 19, 234.
13. HAERTEL, G., LOUHIJA, A., KONTTINEN, A., AND HALONEN, P. I.: Brit. Heart J., 1970, 32, 57.
14. ÅBERG, H.: ACTA Med. Scand., 1969, 186, 157.
15. SZEKELY, P., ET AL: Brit. Heart J., 1970, 32, 209.
16. SCHULMAN, C. L., ET AL: Circulation, Supplement III, 1970, 42, 42.

# The Effects of Chewable Isosorbide Dinitrate in Coronary Insufficiency
# A Report on Exercise Electrocardiograms in 13 Patients.*

PATRICK A. GORMAN, M.D.† AND JOHN M. EVANS, M.D.‡

In STRESS-TESTING for the diagnosis of angina pectoris, observation of the electrocardiogram during exercise is a recommended part of the procedure.[1] A variety of ECG changes are associated with angina, including ST-depression, T-wave changes, arrhythmias, and bundle-branch block. Of these, ST-segment depression is most widely accepted as indicative of myocardial ischemia. ST-segment depression meeting the criteria for abnormality may occur before chest pain and thus provide an early indication of ischemia.

ST-segment depression has been used in the evaluation of therapy for angina pectoris. Russek[2] has studied the effect of therapy on ischemic ECG changes induced by standard exercise. Similar methods have been used in the evaluation of surgical re-vascularization of the heart.[3]

This report describes the reduction of exercise-induced ST-segment depression following the administration of a recently developed chewable form of the long-acting coronary vasodilator, isosorbide dinitrate (ISDN). These results were compared with the effects of placebo and nitroglycerin under the same test conditions.

## Materials and Methods

Male patients ranging in age from 39 to 66 years were selected from the exercise electrocardiogram (ECG) files of the Exercise Laboratory on the basis of a clinical diagnosis of coronary heart disease and an abnormal ECG response to treadmill exercise comprising at least 1 mm. of flat (or downsloping) ST-segment depression or 2 mm. of junctional ST-depression. Patients who developed angina but did not have ST-depression by the above criteria were not considered for the study.

The study procedures involved treadmill walking and continuous ECG recording. The first 8 patients were tested on a treadmill|| with variable speed and a fixed incline of 7%. Following a 1-minute warm-up period at low speed (usually 1 1/2 m.p.h.) the patient rested for 2 minutes and then underwent successive 3-minute exercise periods at progressively higher speeds (usually 2 m.p.h. and 2 1/2 m.p.h.) separated by 5-minute rest periods. The last 5 patients were tested on a treadmill¶ with a variable incline. The speed was kept constant at 2 m.p.h. (1 1/2 m.p.h. for 1 patient), and the incline was increased by 5% every 2 minutes to the highest level comfortably tolerated.

The tests were generally performed in the morning 2 hours or more after a light breakfast. Patients were requested not to smoke before the tests. Digitalis was discontinued for 3 weeks prior to the tests, and vasodilators and beta-blockers were stopped 24 hours before the tests.

Each patient was tested after the administration of the following drugs: (1) 5 mg chewable ISDN**; (2) a chewable placebo identical in appearance to the chewable ISDN; (3) 0.4 mg sublingual nitroglycerin. The tests were conducted on different days, and all patients completed the 3 tests within 2 weeks with 1 exception (H. K.), in which there was a 4-month interval between the last 2 tests because of an episode of acute coronary insufficiency.

In the first and second tests the coded drug (ISDN or placebo) was administered by the technician on a random basis 5 minutes before the start of the test.

---

* Supported by a grant from Stuart Pharmaceuticals, Division of Atlas Chemical Industries, Inc., Pasadena, California 91109.

† Assistant Professor of Medicine, Department of Medicine, George Washington University Medical Center, Washington, D. C. 20037.

‡ Professor of Medicine, Department of Medicine, George Washington University Medical Center, Washington, D. C. 20037.

Requests for reprints should be addressed to: Patrick A. Gorman, M.D., 2150 Pennsylvania Avenue, N.W., Washington D.C. 20037.

|| M. D. Electronics

¶ Collins, Model # P3900

** Isosorbide dinitrate was supplied as CHEWABLE SORBITRATE® by Stuart Pharmaceuticals, Division of Atlas Chemical Industries, Inc., Pasadena, California 91109

Initially the physician did not know whether drug or placebo had been given. However, the second patient tested (B. E.) developed moderately severe hypotension with systolic pressure falling from 145 mm Hg to below 70 mm. Hg without actual syncope after ISDN. The test was interrupted and completed 1 week later with half-dosage. Subsequently it was considered prudent for the physician to know whether drug or placebo had been given so that he could be prepared for possible hypotension. Moreover, patients could invariably distinguish between drug and placebo by the characteristic throbbing sensation induced by the drug. We thought that this change in procedure would not significantly affect the outcome of the study, since evaluation was not made from symptoms but from objective ECG changes.

In the third test, 0.4 mg sublingual nitroglycerin was given after the warm-up. Two minutes later the patient walked with the treadmill set at the maximum level achieved in both of the previous 2 test sessions. The analyses were thereby based on data from the highest maximum work loads common to all 3 test sessions.

Blood pressure was measured during the final minute of each exercise period by means of a cuff and an anesthetist's stethoscope attached to the arm. Pre-exercise measurements were made in the supine and standing positions before and 5 minutes after drug administration.

The electrocardiogram was recorded* continuously throughout the tests. In order to determine the amount of ST-depression, 10 consecutive heart cycles as free of artifact as possible were selected in the final 20 seconds of the definitive exercise period. In these cycles the ST depression was measured from the QRS onset baseline to the nearest 0.1 mm, and the mean of 10 measurements was obtained.

## Results

No complications attributable to exercise-testing were observed, and no significant arrhythmias occurred. Four days after his second test 1 patient (H. K.) developed acute coronary insufficiency with T-inversion after mowing his lawn but completed the third test 4 months later, and 1 patient (L. D.) completed the first 2 tests but was then lost to follow-up.

The symptoms, blood pressure, maximum heart rate, ST-segment changes, and arrhythmias occurring during each test are shown in tables 1, 2, and 3. Twelve patients were tested with placebo, chewable ISDN, and nitroglycerin; a thirteenth was tested with placebo and chewable ISDN only. In the first 8 patients and highest treadmill speed attained ranged from 1 m.p.h. to 2 1/2 m.p.h. with a constant 7% grade. Among the last 5 patients, 1 patient (P. L.) had angina at 1 1/2 m.p.h. on the level and the remainder reached grades ranging from 10 to 20% with constant 2 m.p.h. speed.

The ST-depression was consistently less with ISDN than with placebo, the differences ranging from 0.3 mm to 2.1 mm. The ST-depression was usually less with nitroglycerin than with ISDN although the differences were less, ranging from 0.1 mm to 1.7 mm. There were 2 exceptions, M. W. and H. K; the latter, whose third test was deferred because of intervening acute coronary insufficiency, may be explained by further cardiac impairment before the nitroglycerin test was performed.

The systolic pressure was decreased during exercise with ISDN as compared with control in 4 patients (B. E., F. M., S. H., J. T.), the amounts ranging from 20 to 40 mm Hg. The others showed differences of 5 mm or less, and 2 patients (L. D. and M. W.) showed increases in pressure of 30 and 70 mm Hg respectively.

Angina symptoms were not found to be helpful in distinguishing the effects of different drugs. This was perhaps due to the method of selection of patients on the basis of reproducible ST-changes and not on clearcut anginal symptoms.

Arrhythmias were not troublesome and were largely confined to single premature ventricular contractions in the immediate post-exercise period. Nodal rhythm occurred during the recovery period in 1 case (R. F.) following both placebo and ISDN but not nitroglycerin.

## Discussion

An advantage of ST-depression as an indication of the effect of anti-anginal drugs is that an objective measurement can be made. Sources of error exist in making the ST-measurement, but averaging the values in several consecutive heart cycles, as employed in the current study, reduces the effect of baseline movement and other artifacts usually found in exercising subjects. Sheffield and his colleagues[4] have minimized exercise artifact by storing a succession of QRS complexes in temporal alignment and using median computation to extract a clear signal. The ST-segment displacement is measured by computer analysis. Such a technique would greatly facilitate serial observations in the study of drug effects on the electrocardiogram.

---

* Burdick, Model EK 4

**TABLE 1. Results of Exercise Tests Performed on 13 Patients with Placebo**

| Subject | Age | Highest speed in all 3 tests-mph | Symptoms | Blood Pressure | | Heart Rate | Maximum-mm ST-Depression | Arrhythmias |
|---|---|---|---|---|---|---|---|---|
| | | | | Rest | Exercise | | | |
| R. F. | 49 | 2 | slight chest pain | 130/100 | 170/110 | 140 | 2.0 junct | nodal rhythm post-exercise |
| B. E. | 58 | 2 1/2 | 0 | 130/100 | 170/90 | 150 | 3.5 junct | 0 |
| H. K. | 64 | 2 1/2 | 0 | 110/70 | 125/70 | 118 | 3.9 | rare PVC post-exercise |
| H. H. | 54 | 2 1/2 | 0 | 150/90 | 210/105 | 160 | 4.5 | 0 |
| F. M. | 39 | 2 1/2 | slight dyspnea | 110/90 | 130/80 | 123 | 4.5 | rare PVC post-exercise |
| S. H. | 59 | 2 1/2 | 0 | 125/75 | 170/90 | 143 | 2.2 | 0 |
| L. D. | 67 | 2 | 0 | 130/80 | 170/90 | 137 | 4.8 | 0 |
| C. J. | 62 | 1 | slight chest pain | 150/100 | 170/100 | 137 | 2.0 | 0 |
| M. M. | 66 | 2<br>20% grade | 0 | 120/60 | 150/70 | 130 | 3.5 | 0 |
| M. W. | 54 | 2<br>15% grade | 0 | – | 120/80 | 151 | 1.9 | 0 |
| G. S. | 52 | 2<br>15% grade | slight dyspnea | 120/80 | 125/60 | 118 | 3.5 | 0 |
| P. L. | 62 | 2<br>level | tightness in throat | 180/80 | 150/70 | 113 | 6.0 | 0 |
| J. T. | 57 | 2<br>10% grade | tightness in throat | 140/85 | 155/70 | 108 | 1.9 | 0 |

**TABLE 2. Results of Exercise Tests Performed on 13 Patients with Chewable Isosorbide Dinitrate**

| Subject | Age | Highest speed in all 3 tests-mph | Symptoms | Blood Pressure | | Heart Rate | Maximum-mm ST-Depression | Arrhythmias |
|---|---|---|---|---|---|---|---|---|
| | | | | Rest | Exercise | | | |
| R. F. | 49 | 2 | slight chest pain | 150/110 | 170/110 | 143 | 1.7 junct | nodal rhythm post-exercise |
| B. E. | 58 | 2 1/2 | 0 | 110/90 | 130/80 | 140 | 3.2 junct | 0 |
| H. K. | 64 | 2 1/2 | slight dyspnea; fatigue | 115/70 | 130/75 | 117 | 2.0 | 0 |
| H. H. | 54 | 2 1/2 | 0 | 120/80 | 205/105 | 139 | 3.1 | 0 |
| F. M. | 39 | 2 1/2 | 0 | 110/90 | 110/80 | 118 | 3.6 | 0 |
| S. H. | 59 | 2 1/2 | 0 | 115/80 | 150/80 | 128 | 1.2 | 0 |
| L. D. | 67 | 2 | 0 | 150/90 | 200/105 | 137 | 2.7 | 0 |
| C. J. | 62 | 1 | 0 | 146/100 | 160/104 | 140 | 1.4 | 0 |
| M. M. | 66 | 2<br>20% grade | 0 | 105/70 | 145/60 | 137 | 2.9 | 0 |
| M. W. | 54 | 2<br>15% grade | 0 | 130/90 | 190/90 | 148 | 0.9 junct | 0 |
| G. S. | 52 | 2<br>15% grade | 0 | 105/70 | 120/70 | 106 | 2.6 | 0 |
| P. L. | 62 | 1 1/2<br>level | 0 | 150/80 | 145/70 | 115 | 4.0 | 0 |
| J. T. | 57 | 2<br>10% grade | 0 | 115/80 | 130/80 | 128 | 1.4 | 0 |

TABLE 3. Results of Exercise Tests Performed on 12 Patients with Nitroglycerin.

| Subject | Age | Highest speed in all 3 tests-mph | Symptoms | Blood Pressure Rest | Blood Pressure Exercise | Heart Rate | Maximum-mm ST-Depression | Arrhythmias |
|---|---|---|---|---|---|---|---|---|
| R. F. | 49 | 2 | 0 | 150/110 | 170/120 | 137 | 1.4 junct | occasional PVC exercise and post-exercise |
| B. E. | 58 | 2 1/2 | angina in last minute | 100/80 | 165/90 | 148 | 3.1 junct | 0 |
| H. K. | 64 | 2 1/2 | slight dyspnea | 115/80 | 110/80 | 120 | 2.6 | rare PVC post-exercise |
| H. H. | 54 | 2 1/2 | 0 | 140/85 | 200/90 | 144 | 1.4 | rare PVC post-exercise |
| F. M. | 39 | 2 1/2 | 0 | 90/70 | 90/70 | 125 | 3.2 | 0 |
| S. H. | 59 | 2 1/2 | 0 | 90/70 | 140/80 | 116 | 0.4 | 0 |
| L. D. | 67 | not tested | | | | | | |
| C. J. | 62 | 1 | 0 | 150/100 | 180/100 | 150 | 1.1 | 0 |
| M. M. | 66 | 2<br>20% grade | 0 | 110/70 | 150/80 | 138 | 2.5 | 0 |
| M. W. | 54 | 2<br>15% grade | 0 | – | 130/100 | 154 | 1.4 junct | 0 |
| G. S. | 52 | 2<br>15% grade | 0 | 100/70 | 110/70 | 116 | 2.1 | 0 |
| P. L. | 62 | 1 1/2<br>level | 0 | 180/80 | 150/70 | 113 | 3.7 | 0 |
| J. T. | 57 | 2<br>10% grade | 0 | 115/80 | 130/80 | 114 | 0.9 junct | 0 |

It is important to distinguish between the effect of anti-anginal drugs on reducing ST-segment displacement and on improving angina. Fries[5] has emphasized that the reduction of ST-changes in the ECG during exercise by a vasodilator drug does not provide assurance that the drug will be effective in the long-term prophylactic treatment of angina. He considers that the place of the exercise ECG may be as an additional index of effectiveness in a clinical trial.

## Summary

Twelve patients had exercise ECG tests with chewable placebo, chewable isosorbide dinitrate (ISDN), and sublingual nitroglycerin. A thirteenth patient was tested with placebo and ISDN only.

In all patients ISDN was associated with reduced ST-segment depression compared with placebo by amounts ranging from 0.3 mm to 2.1 mm.

In 10 out of 12 patients nitroglycerin was associated with reduced ST-segment depression compared with ISDN by amounts ranging from 0.1 mm to 1.7 mm.; 2 patients showed decreased ST-segment depression with ISDN when compared with nitroglycerin.

Maximum systolic blood pressure during exercise with placebo was decreased with ISDN in 4 patients by amounts ranging from 20 to 40 mm Hg. In 7 there was no change, and in 2 there was an increase.

It is concluded that the acute physiological effects of chewable ISDN in coronary insufficiency, as judged by reduction of ST-segment depression, are comparable with those of nitroglycerin though less marked in degree.

## Acknowledgments

We wish to thank Mrs. Rosalind Weiss and Mrs. Dorothy McConnell for their excellent technical assistance.

## References

1. Exercise Tests in Relation to Cardiovascular Function; World Health Organization Technical Report Series, 1968, 388.
2. RUSSEK, H. I.: Intractable Angina Pectoris: Medical Clinics of North America, 1970, 54, 333.
3. BLOOMER, W. E., ET AL: Evaluation of Myocardial Revascularization with Arterial Implants. An objective study using electrocardiography and Maximal stress testing. Annals of Internal Medicine, 1970, p. 73, 913.
4. SHEFFIELD, L. T., ET AL: On-line analysis of the Exercise Electrocardigram. Circulation, 1969, 40, 935.
5. FRIES, E. D.: Cardiovascular Drugs: Experience of the drug efficacy study (Editorial). Circulation, 1970, 41, 3.

# The Hypercatabolic Patient with Acute Renal Failure*
## Report of Two Cases

ANNE M. THOMPSON, M.D., ATIN GUHA, M.D., STEPHEN GOLDBERGER, M.D.,
NORMAN KRAMER, M.D., AND ALVIN PARRISH, M.D.

THE INCREASINGLY WIDESPREAD availability of hemodialysis facilities, as well as more general understanding of sound conservative management, would seem to presage an era of improved survival in acute renal failure. However, in 1 group of patients the prognosis remains poor. These are the patients who develop acute renal failure following surgery or trauma. Associated complications exist in this group, such as infection, massive tissue destruction, and large hematomata, which in addition to their inherent risks, also cause a marked increase in severity and rapidity of onset of the uremic state.

Most workers[1-4] have reported an overall mortality rate of 30-50% in acute renal failure. Hamburger[5] reported 103 patients who had developed acute renal failure following traffic accidents or civilian disaster. The mortality in this group was 59%. In a group of 31 Korean War casualties treated with hemodialysis, Smith et al,[6] reported a mortality of 68%. In many patients in the above groups death was due to complications of wounds rather than acute renal failure.

The clinical course of these patients is characterized by a rapid rate of onset of the clinical and biochemical changes of uremia. In the military casualties studied by Teschan et al,[7] two-thirds of the patients had symptoms of uremia by the fifth post-wound day, with some developing them as early as the second day. The mean rate of plasma non-protein nitrogen accumulation in these men was 50 mg.% per 24 hours, and the mean increment of plasma potassium concentration following the initial value was 0.7 mEq. per liter per 24 hours.

This report describes 2 severely hypercatabolic patients who were referred for treatment of acute renal failure following major surgery and trauma.

Case 1. R. L., a 55-year-old white man had been admitted to another hospital on December 6, 1968, with a bleeding duodenal ulcer. Hemigastrectomy and vagotomy were performed on December 9, 1968. Postoperatively the patient did well with stable vital signs and satisfactory urine output.

On the 3rd postoperative day he developed shock with a blood pressure of 70/0, pulse rate of 160/minute, and temperature of 104°F. A diagnosis of septic shock was made, and he was treated with antibiotics and steroids. Vital signs and urine output improved. However, he began to develop abdominal distention, and a peritoneal tap revealed yellowish material. He underwent a laparotomy because of suspicion of leakage from the gastrointestinal tract. At surgery, a large amount of yellow material was found in the peritoneal cavity with an associated rupture of the lower esophagus. This was closed, a jejunostomy performed, and a drain left in place.

The patient remained febrile throughout this period. Klebsiella-aerobacter organisms were obtained from cultures of the left upper quadrant drain-site and from the jejunostomy. Blood cultures were positive for Gram-negative rods on 1 occasion. He was treated with Keflin and Chloromycetin. Despite persistent fever he improved and tolerated feedings through his jejunostomy tube. On December 25, 1968 his blood urea nitrogen (BUN) was 24 mg.% and creatinine 2.6 mg.%; on December 29th a BUN was 43 mg.% and a creatinine 3.4 mg.%.

On December 31, 1968 the patient developed sudden respiratory distress with cough productive of foamy sputum mixed with fresh blood. He had a respiratory arrest, was intubated, and resuscitated. Bronchoscopy was performed and the findings were consistent with aspiration.

He remained in shock for several hours and was given 5 units of whole blood in an attempt to raise his blood pressure. His vital signs improved, but he became extremely oliguric, with urine output of 2 to 10 cc per hour. His BUN and creatinine rose rapidly and he developed hyperkalemia. On January 2, 1969 his BUN was 180 mg.% and his potassium 7.5 mEq./L.

He was transferred to the G.W.U.H. on the evening of January 2, 1969. An arteriovenous shunt was inserted in his left arm on January 3, and hemodialysis was performed the same day for 6 hours. He was then dialyzed 12 more times over the next 14 days. Daily BUN values, pre- and postdialysis, are shown in figure 1.

---

* From the Department of Medicine, George Washington University Medical Center, Washington, D. C. 20037.

On January 7, 1969 the patient developed gastrointestinal bleeding and a urinary tract infection. He was treated with Colymycin and Chloromycetin for the urinary-tract infection and a wound infection. A gastrographin swallow showed no obvious source of bleeding. The bleeding persisted for approximately 1 week, requiring frequent transfusions. He also had multiple bouts of arrhythmias during this time.

On January 17th the urine output began to improve, and by January 26 it was 1,500 cc per day. The last dialysis was performed on January 20. Subsequently the BUN and creatinine gradually dropped to normal limits. Intermittent gastrointestinal bleeding and cardiac arrhythmias persisted for several weeks, but the patient steadily improved and was discharged from the hospital on March 8, 1969.

He was last seen as an outpatient in June, 1970. At that time he was doing well. Creatinine clearance was 74 cc per minute, and he had had no recurrence of his gastrointestinal problems.

Case 2. P. R., an 18-year-old white man sustained multiple injuries in an auto accident on April 18, 1970. Exploratory laparotomy on the night of the accident revealed hemorrhage from the splenic pedicle and from 3 liver lacerations; there was a small superficial tear on the inferior surface of the right lobe, a moderate tear at the fundus of the cholecystohepatic bed, and a deep tear in the medial segment of the left lobe of the liver next to the round ligament. There was a contusion of the tail of the pancreas, retroperitoneal hematomata surrounding both kidneys, and pelvic and hip fractures. There was a 2 cm laceration of the lower jejunum with associated mesenteric hematomata. The renal pedicles and bladder were intact. These were managed initially by a splenectomy, ligation, suture and electrocautery of the liver lacerations, and resection of 10 inches of jejunum. Examination of the kidneys showed no gross injuries. A Foley catheter was inserted without difficulty. However, the absence of urine prompted performance of an intravenous pyelogram on the operating table which showed no dye excretion, but the blood pressure was 60/0 at the time. Drains were placed in the left side to the splenic bed and kidney, Morrison's pouch, space of Retzius, and into the flank and pelvis. The patient received 11 units of whole blood during the operation.

In addition to the above, he also sustained a right hemopneumothorax, transverse fracture of the distal

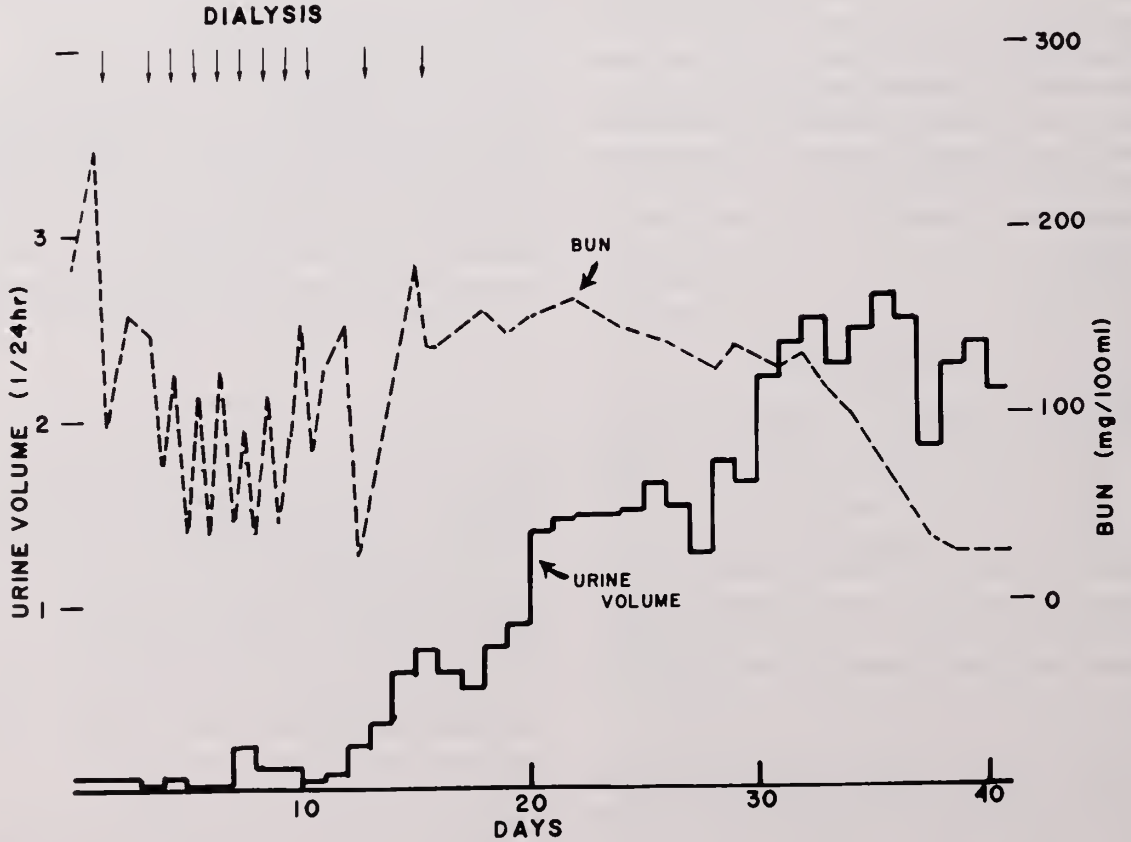


FIG. 1. Clinical course of patient R. L. Arrows at top indicate hemodialysis. Dotted line represents daily fluctuation in BUN.

radius on the right, transverse fracture of the proximal phalanx of the left index finger, and comminuted displaced fractures of the superior and inferior left pubic rami with extension into the ischium and separation of the sacro-iliac joint. There were also multiple superficial lacerations and abrasions.

Postoperatively the patient was oliguric. The urine output over the 24-hour period from April 19 to 20 was 80 cc. The BUN rose to 66 mg.% and the potassium to 6.1 mEq./L, while the $CO_2$ fell to 15. He was transferred to G.W.U.H. on April 20, 1970 for hemodialysis. Shortly after admission a chest tube was inserted on the right and 600 cc of blood aspirated.

An arteriovenous shunt was inserted in the right leg on April 21, and 31/2-hour, hemodialysis was performed that evening. Subsequently the patient had 16 hemodialyses over a 25-day period (figure 2).

The patient was persistently febrile through his first month in the hospital. Cultures of wounds and drains taken on the day of admission grew out scanty *Candida albicans.* Urine and blood cultures were negative. Blood cultures onApril 24 grew out *Candida albicans.* Other than a low-grade fever—$37^5$ to 38 degrees C.—the patient showed no evidence of systemic infection, so it was elected not to treat with an antibiotic. The arteriovenous shunt was removed on May 25, 1970, and the patient became afebrile.

Daily variations in the BUN are shown in figure 2.

The patient also demonstrated hypertension (160-180/100) which lasted for about 5 weeks and then spontaneously ceased. The blood pressure is currently ranging from 110-120/60-70. This was most probably due to transient development of a Page kidney.[8]

In addition to this, he demonstrated a persistent thrombocytosis and leukocytosis which gradually resolved as his renal function returned to normal. His wounds healed without difficulty despite the renal failure.

On May 30, 1970 the creatinine clearance was 156 cc per minute. Surgery was then performed for residual orthopedic problems. The patient was discharged on June 6, 1970 in good condition.

## Discussion

Both patients were severely hypercatabolic initially, with rapidly rising BUN and potassium. The average daily amount of BUN rise was 65.8 mg.% in patient P. R. and 68.4 mg.% in patient R. L., the range for the former being 11-80 mg.%, for the latter

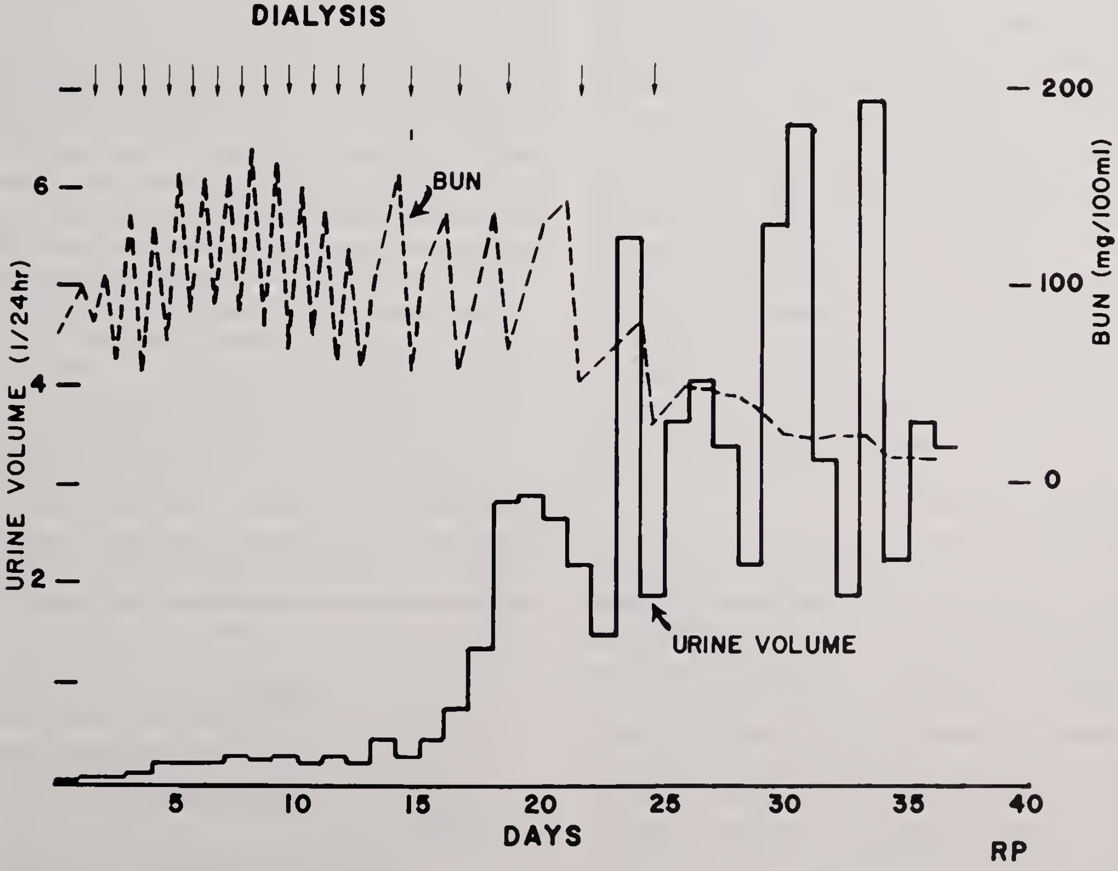


FIG. 2. Clinical course of patient R. P. Arrows at top indicate hemodialysis. Dotted line represents daily fluctuation in BUN.

27-116 mg.%. The average daily increase in serum potassium concentration was 1.04 mEq./L in P. R. and 1.92 mEq./L in R. L., with a range of 0.5-1.6 and 0.7-4.1 mEq./liter per day respectively.

Both patients had several major complications which undoubtedly contributed to their hypercatabolic state, including pneumonia, peritonitis, and retroperitoneal hematomata.

Control of uremia in these patients required daily hemodialysis for more than 1 week. Despite the relatively short duration of acute renal failure prior to the first dialysis (3 and 4 days) both showed clinical and laboratory evidence of rather severe uremia at the time of referral to the Renal Division. Daily dialysis kept uremic symptoms to a minimum and enabled them to heal their surgical wounds and recover from complications.

The value of prophylactic daily hemodialysis has been emphasized by Teschan et al[9, 10], Easterling[11], and Salisbury.[12] Its importance is clearly demonstrated by the course of these 2 patients.

The development of techniques for using semi-permanent indwelling cannulas[13] has made the frequent use of hemodialysis practical. Quinton[13] devised usable arterial and venous cannulas which can be left in vessels for indefinite periods of time and allow connection of the patient's blood supply with the hemodialyzer. A silastic cannula is inserted into a radial or posterior tibial artery, and a similar cannula is placed in a nearby vein. When connected together, an arteriovenous shunt is established, with a sufficiently rapid bloodflow to inhibit clotting. The silastic or teflon tubes, since they have relatively non-wetting surfaces, also inhibit clotting. In use, the arterial cannula is connected to the inlet line of the hemodialyzer and the venous cannula to the outlet line. Dialysis can then be undertaken as often and for as long a period of time as is necessary. Anticoagulation is necessary only during dialysis, and when bleeding is a problem, heparinization of the dialyzer alone can be undertaken.[14] Such shunts were used in both patients.

Baslov and Jorgensen[15] in a survey of 499 patients with acute renal insufficiency reported an 80% mortality rate in patients with severe underlying surgical disease and complications such as hemorrhage or infection. It has been our experience that such patients do very poorly when dialysis is started late or performed less frequently. Even under the best of circumstances these patients are at a great risk because of the severity of the underlying disease and complications. To allow them to become severely uremic further complicates the course by superimposing enzymatic defects leading to muscle wasting, poor wound healing, and neurological and cardiac problems.

The impairment of glucose utilization in uremia has been rather extensively studied.[16, 17] Return to normal or near normal function with adequate hemodialysis has been demonstrated.

Conservative management of patients in renal failure involves severe protein restriction, thus limiting the materials available for repair of wounds. Daily hemodialysis allows resumption of normal diet, with greatly improved nutrition and preservation of positive nitrogen balance.

Much has been reported recently on the defect in platelet function observed in the uremic patient.[18] Preservation of a more nearly normal state by daily dialysis undoubtedly plays a major role in preventing the appearance of the hemorrhagic complications of uremia. In a series of 45 patients reported by Easterling and Forland[11] only 1 on prophylactic daily hemodialysis was observed to develop uremic gastritis and colitis with hemorrhage leading to death.

The major cardiovascular complications in uremia are congestive heart failure, pericarditis, and hypertension. The congestive heart failure is usually due to fluid overload, a problem which can be easily controlled with good conservative management. Prophylactic dialysis has made it possible in most cases to prevent pericarditis and to control hypertension. Patient P.R. developed hypertension which was probably due to a mechanism other than renoprival. He is known to have had a peri-renal hematoma, and we think this elevated blood pressure was due to development of a Page kidney, the problem resolving as the hematoma was reabsorbed.

Daily hemodialysis started very early in the course of acute renal failure maintains the patient in a relatively normal state, allows good nutrition, and promotes healing of wounds.[9, 11, 12, 19-21] The patients reported here are striking examples.

It is therefore recommended that, in the patient who develops acute renal failure following major surgery, dialysis be started early to prevent the development of the uremic syndrome and that frequency of dialysis be based on rate of rise of BUN and potassium in order to maintain the patient in as nearly normal a state as possible.

## References

1. BREST, A. N., AND MOYER, J. H.: Renal Failure. Philadelphia: J. B. Lippincott Co., 1967. p. 285.
2. MAHER, F. T., AND BROADBENT, J. C.: J.A.M.A., 1958, 166, 608.

*(Continued on page 288)*

# Heredofamilial Tremor
# A Case Study

RICHARD RESTAK, M.D.* AND SEAN O'REILLY, M.D.†

WITH THE RELEASE by the Food and Drug Administration of L-Dopa for general medical use in Parkinsonism, it can be expected that an increased number of patients will be referred for evaluation of tremor and possible therapy with L-Dopa. For this reason an uncommon but not rare disorder deserves re-appraisal and clearcut differentiation from Parkinsonism. Treatment approaches are distinctly different.

## Report of Case

Mr. C., a 48-year-old white man was admitted to George Washington University Hospital with a diagnosis of depressive reaction. Neurological consultation was sought with the specific request that he be considered for L-Dopa therapy because of a tremor which had been present in the right hand since childhood (the patient remembered specifically the presence of the tremor at age 7). A similar tremor had been present in the patient's father, his fraternal aunt, and recently in his 16-year-old son (2 daughters remain free of the tremor). No tremor had ever been observed in Mr. C.'s 2 siblings. Mr. C. had been led to believe that his own tremor had been caused by a birth injury. Its presence in his son he considered "psychological" in origin.

Questioning regarding the tremor elicited that Mr. C. as a child had frequently been chided regarding nervousness. He particulary recalled great subjective discomfort when his handwriting had been observed by a teacher in class. At such times the tremor had increased in amplitude, and his ability to control it had been completely lost. At one time, abatement had been obtained by alcohol, but this had been abandoned because of worsening of the tremor afterwards. When engaged in his hobby of painting Mr. C. was able to terminate the tremor completely for short periods of time by "concentrating on it".

Neurological examination revealed an articulate, cooperative man in excellent contact with his surroundings. Mentation was unremarkable; affect was moderately depressed.

A fine to medium tremor of the right hand was observed. It was compound, occurring at several joints (interphalangeal and wrist) and extending up the forearm around the long axis. It was increased with intention. Some impairment of rapid alternating movements of the right hand was observed although no evidence was found of altered tone, rigidity, or loss of accessory movements of the upper extremities with ambulation. Speech was normal as was the remainder of the neurological examination.

## Discussion

First mention of a benign, self-limiting, usually mono-symptomatic tremor dates from Dana:[1]

"A fine tremor, constantly present in typical cases during waking hours, voluntarily controlled for a brief time, affecting nearly all the voluntary muscles, chronic, beginning in very early life, not progressive, not shortening life, not accompanied with paralysis or any other disturbance of nervous function. It resembles to some extent the tremor of paralysis agitans, still more a simple neurasthenic tremor. A most striking clinical feature is its marked hereditary or family type, and its transmission along with other nervous diseases."

Certain features bear re-emphasis in regard to our case. Of prime interest is the importance of history. As the name implies, herdofamilial tremor occurs with striking and dramatic consistency from generation to generation. The pattern of inheritance, however, has not been definitely established. The genetic details are still somewhat obscure, and it is probable that more than 1 type of inheritance may be concerned. In most families the affection is transmitted as a Dominant.[2]

The manifestations may appear within the widest time spectrum. The onset may be noted at any period from early infancy to old age.[3] A "congenital tremor" present in babyhood or early childhood; a juvenile form starting around puberty; a middle-age onset which raises the suspicion of early Parkinsonism are all compatible with the disorder. In late life it is frequently accepted as a senile tremor when, in actuality, tremor is really a rather uncommon physical sign of old age.[4] The most common period is from early adulthood to middle life as in the present

---

* Resident, Department of Neurology, George Washington University Medical Center, Washington, D. C. 20037

† Chairman, Department of Neurology, George Washington University Medical Center, Washington, D. C. 20037

case. The phenomenon of "anticipation" (earlier appearance in each succeeding generation) has been noted by many observers. This was observed in the present case in Mr. C.'s 16-year-old son.

Regarding clinical recognition of heredofamilial tremor one could hardly do better than refer to Dana's original observations. For completeness, however, recognition should be made that its manifestation can be as variable as the age of onset. In those cases limited to the hands it can vary from a fine, rapid oscillation of the fingers to a much slower type of wide amplitude. In some patients it is present usually at rest and may be eliminated by initiation of movement. Contra-wise, as with Mr. C., it may be exacerbated with intention and thus resemble a typical tremor of cerebellar origin. In other cases it is noticeable when the hands are outstretched but ceases when the hands are supported on a table. Tea, coffee, tobacco, fatigue, inter-current illness are all aggravating factors. Almost universally, nervous tension or anxiety aggravate the tremor immensely. It is typically absent during sleep.

The response to alcohol is interesting. As with Mr. C., the patient often claims that the ingestion of moderate to large quantities of alcohol will mollify the tremor. As anticipated, this frequently forms the basis for periodic and excessive alcohol usage. "Morning after" malaise and hangover, however, usher in a renewal of the tremor which casts serious doubts on what benefit, if any, is consequent to alcohol as a pharmacological tool in tremor reduction.

The tremor generally appears initially in the hand and forearm. The common pattern is for it to progress to the opposite hand over the period of a few years. It may involve the lower limbs. It may involve the head, neck, or jaw next, an unusual pattern of development for Parkinsonism but not unusual for idiopathic tremor. Quite frequently it remains in the original limb affected and appears to progress slowly, if at all. Periods of remission are common.[5]

As a disability the tremor is much less of a handicap than might be expected. It can almost always be stilled by an effort of will for short periods of time—thus the ability of Mr. C. to perform painting maneuvers of a moderately delicate nature. Except for such short-lived spells of suspension by concentration, movements of a more protracted duration are distinctly impaired.

Handwriting is characteristic with tremulous features and angularity of normally rounded letters. It differs from the micrographia of Parkinsonism.

A considerable literature exists documenting attempts to localize the anatomic site involved, but there is no general agreement on localization.

The clinical presentation of the patient with heredofamilial tremor frequently involves the complaint of "nervousness" which is however, without any concomitant affect disorder, being merely the presence of tremor and associated anxiety or apprehensiveness regarding its meaning. Often, as in the present case, the tremor is regarded as "psychologically" determined. Perhaps impetus to this view is given by the frequent concurrence of "neuropathic traits". Dana, in an earlier study, quoted details of 3 families, in 1 of which alcoholism, insanity, eccentricity, and epilepsy featured prominently.[6] Raymond,[7] in a paper published in 1892, discussed the subject in terms of its association with a neuropathic stock. Consistent correlations have not been established. It is interesting in this regard to consider the present case in the context of a frequently recurring associated nervous manifestation, namely, depression.

Of critical importance is the lack of response to agents such as L-Dopa. In actuality, an exacerbation of the tremor results. "It does fail totally in heredofamilial tremor . . . this is well known in essential familial tremor where aggravation occurs."[8] Again, "I think it may not only fail in the treatment of heredofamilial tremor but actually make the condition worse."[9] Schwab[10] reported a patient with unilateral rigidity and a resting tremor on his dominant side, while on the other side he had an action or postural familial tremor. Both the rigidity and tremor on his dominant side were vastly improved after treatment with L-Dopa, but the cerebellar tremor on the opposite side was made definitely worse.

Similarly, poor results have been obtained with Artane or other anti-cholinergics. At present, phenobarbital or Valium appear to be of both subjective and objective benefit. Not to be underestimated as a therapeutic force, however, is a reasonably sanguine attitude on the part of the physician in regard to this comparatively harmless disorder.

Diagnostically important is a clearcut differentiation from Parkinson's syndrome which usually has in addition to tremor, cogwheel rigidity, a posture of generalized flexion dystonia, masked facies, and akinesia or bradykinesia. Generally speaking, these are all absent in the typical case of heredofamilial tremor.

Parkinsonian patient

Gordon A. Darlington

Familial Tremor

Gerald S Collins

## Summary

A benign, self-limiting, monosymptomatic, strongly hereditary movement disorder is described and differentiated from Parkinsonism. A lack of response to L-Dopa and in many cases aggravation of the tremor emphasize the importance of clinical recognition and "nontreatment" of this entity with L-Dopa.

## References

1. DANA, C. L.: Hereditary Tremor. American Journal of Medical Science, 1887, 94, 386.
2. CRITCHLEY, M.: Observations on Essential (Heredo-familial) Tremor. Brain, 1941, 72, 121.
3. DAVIS, H. C. AND KUNKLE, C. F.: Benign Essential (Heredofamilial) Tremor, AMA Archives of Internal Medicine, 1951, 87, 808.
4. CRITCHLEY, M.: Neurology of Old Age. Lancet, 1931, 1, 1221.
5. KREISS, P. Ueber hereditaren Tremor. Deutsche zeitschrift Nervenheilk, 1912, 41, 111.
6. CRITCHLEY, M.: Neurology of Old Age. Lancet, 1931, 1, 1221.
7. RAYMOND, F.: Le Tremblement Essential Hereditaire. Bulletin of Medicn 1892, 6, 205.
8. TISSOT, R.: Parkinsonism Aggravated or unimpaired by L-Dopa, Particular Clinical Signs. L-Dopa and Parkinsonism. A. BARBEAU AND F. H. MCDOWELL, editors. Philadelphia: F. A. Davis Company, 1970, p. 20.
9. COOPER, I.: Op cit, p. 21.
10. SCHWAB, R.: Op Cit, p. 22.

# Hymenoptera Allergy: When to Immunize*

HALLA BROWN, M.D. AND HARRY S. BERNTON, M.D.†

WHEN A PATIENT has suffered a generalized reaction from the sting of a hymenopterous insect a number of choices for treatment are open to physicians. When the patient has experienced the typical symptoms of anaphylaxis (generalized urticaria and swelling, laryngeal edema, diarrhea, vomiting, loss of consciousness, or shock), when his skin tests to 1 or more of the Hymenoptera are positive to highly diluted extracts, and when the patient's exposure to insects is frequent or likely, the decision is easy. The physician must immunize the patient by giving a course of injections. Immunization will provide protection in 88% of patients stung again by the same species of insect.

Often, however, the symptoms are not typical of anaphylaxis.[1] The patient may have felt weak, had chills, become nauseated without eruption, or had loss of consciousness. The symptoms may have been slow in onset, reaching their peak 3 hours to 3 days after the sting. The patient may complain only of feeling achy or "below par" for a week after the sting. He may complain of weakness of an arm or leg. The variations in symptoms are legion.

The significance of local reactions, too, may present a diagnostic problem. Occasionally, a patient who previously experienced no untoward reaction after a sting gradually develops larger and larger local reactions with every sting.[2] Sometimes this type of reaction presages anaphylaxis. Should the patient be immunized when the local reactions reach 4″ diameter and last 2 or 3 days, or should one wait until the local reaction is so big that the entire limb becomes swollen for a week? Or, since many big local reactions never progress to anaphylaxis, should the patient not be immunized?

Skin tests with hymenopterous extracts are not necessarily diagnostic. They may be negative in the face of typical anaphylaxis, or they may be strongly positive in a patient whose symptoms are difficult to define. However, in general they have proven to be valuable for confirming hypersensitivity, for estimating the first safe dose in treatment (immunization), and for demonstrating sensitivity in little suspected or atypical cases. In Hymenoptera allergy it must be remembered that the venomous extract diluted 1:100 (equivalent to 1,000 PNU/cc) is irritating to normal skin. In a study of 200 patients, 37% of "normal" males gave positive reactions when tested intradermally with extract containing 60 PNU/cc. Therefore, a patient exhibiting positive skin-tests does not necessarily suffer a generalized reaction after a subsequent sting.

When the significance of the patient's reaction to a sting is in doubt, the following factors should be considered:

*Family history or past history of allergy:* Half or more of the families of patients allergic to the Hymenoptera have a strongly positive family history of allergy, usually inhalant allergy, sometimes food allergy, occasionally insect allergy. Therefore, if the patient's symptoms are equivocal, this fact is in favor of sensitivity. If the patient suffers from hay fever or food allergy, the likelihood of his being allergic to insects is greater than otherwise. However, certain occupations predispose to repeated stings by a single species of Hymenoptera; telephone linesmen and meter readers are frequently stung by wasps, milk deliverers by yellow jackets. In these cases the sensitivity develops because of repeated stings rather than because of an inherited tendency to develop skin sensitizing antibodies to an extraneous allergen.

*Interpretation and timing of skin tests.* If the skin tests with individual hymenopteran antigens are strongly positive at weak dilutions and the saline (or other) control is negative, one should note the interval between the most recent sting and the date of testing. If this be less than 3-4 weeks, frequently the tests will be negative. This temporary condition is thought to arise because the patient's skin-sensitizing antibodies may become bound or used up during a generalized reaction. Some patients form the antibodies slowly so that, if tested immediately after a sting, the skin tests will be negative. If tested 1-2 months or longer after a sting, positive tests will be found.

*Passive transfer.* If one is still in doubt regarding the significance of the diagnostic workup, passive transfer can be attempted by using the patient's

---

* Supported by a grant from the John A. Hartford Foundation, Inc.

†From the Department of Medicine (Allergy), George Washington University Medical Center, Washington, D. C. 20037.

serum to sensitize a site in the skin of a normal recipient. Forty-eight hours later the carefully marked site is challenged with the antigen of the suspected hymenopteran. If the serum transfers reactivity, i.e., the test is positive, immunization should be undertaken. The passive transfer test, although less sensitive, gives fewer "false positive" reactions than the direct intradermal tests.

If the patient's reaction was atypical for anaphylaxis, the skin tests were of doubtful significance despite proper timing, and the passive transfer test done in triplicate was equivocal, the final decision depends on one's philosophy and attitude toward medical problems. The cautious physician will immunize because:

a. Even if the patient is not truly allergic, immunization rarely causes untoward symptoms.

b. It usually protects the patient if he is hypersensitive.

c. The physician is not legally liable for negligence.

If the diagnosis of allergy is genuinely in doubt, since the injections theoretically entail the risk of sensitization to foreign proteins in the immunizing extract, some physicians prefer to rely on emergency treatment at the time of the sting.

Immunization is the best prophylactic treatment known. Most physicians prefer to institute it even in doubtful cases, since none so far has been shown to have become sensitive to the proteins contained in the immunizing extract.

Even before immunization, the patient should be instructed in emergency measures: in prevention of stings, in instant removal of the stinger of the honey bee, and in the importance of having within reach emergency medication—a rapidly absorbed antihistamine and a syringe pre-loaded with epinephrine.

## Summary

The clinical characteristics and the skin test reactivity of typical and atypical systemic reactions to Hymenoptera stings have been briefly described. If the diagnosis is in doubt, the following considerations may be helpful: family history or past history of allergy, timing of skin tests, and passive transfer of hypersensitivity. This additional information may enable the physician to decide whether to immunize the patient. Immunization, although not 100% successful, is the best prophylactic treatment known. In addition, in warm weather emergency medication, including a syringe pre-loaded with epinephrine 1:1000, should be carried by the patient.

## References

1. BROWN, HALLA, AND BERTON, HARRY S.: Allergy to the Hymenoptera V., Clinical Study of 400 Patients. Arch. Intern. Med., 1970, 125, 66.
2. KAILIN, ELOISE, Chairman: Insect Allergy Committee of the American Academy of Allergy. Insect Sting, Allergy: Questionnaire Study of 2606 Cases. J.A.M.A., 1965, 193, 115.

# Teaching the Rudiments of Anatomic Pathology with Color Fiche

J. CHANDLER SMITH, M.D.*

## The Problems

A PROBLEM in the teaching of anatomical pathology is the unavailability of gross specimens that are life-like. These are needed so that the student may see the various lesions in the most realistic way and so that a reference for the understanding of histologic alterations will be provided. Such specimens are not available because fixation precludes viable appearance, and pre-scheduling of fresh specimens for student use is not possible. As a consequence, pathology museums are stocked with fixed tissues displayed in glass containers and in transparent plastic bags, and attempts are made to restore viable appearance by special fixation, color injection, and freeze-dry procedures. Color photography is also employed, but publication of color plates is prohibitively expensive. Thus the central problem persists because none of the methods has been altogether successful.

A second problem is that the histologic slide is not taken from the gross specimen that the student examines. It is representative of the gross specimen, but it is in fact not taken from that particular lesion. The student accepts the representative nature of the section, but he is deprived of the actual experience of examining the microstructure of the gross specimen that he sees. This causes a third difficulty; since the gross specimen and the histologic slide came from different lesions, and often from different persons, it is ordinarily not possible to give a single clinical account of the patient from which they arose. Instead, a composite account of what is presumed to be characteristic of patients with this condition has to be formulated. Thus the student sees a gross specimen from 1 source, a histologic slide from another source, and a clinical record that is an amalgam of patients with the condition depicted. The artificial and contrived nature of this experience is readily apparent, and the exercise is deprived of realism. Moreover, case-oriented teaching is impaired by this arrangement.

## The Resolution

The teaching of pathology would be improved if fresh gross specimens and histologic slides from those specimens could be simultaneously provided for the student together with a clinical account of the patient from which those tissues arose. That would allow the morphologic and clinical aspects to be merged into a single true account, and the student could comprehend the gross lesion and its microstructure as a single pathologic entity. Realism would thus replace contrivance, and understanding would be improved.

Some progress toward this goal has recently been made possible by the availability of color fiche. Fiche means photographic miniature. A fiche is a card with several minute photographs, each of which can be projected and magnified in a viewer for reading or examination. While black and white fiche have been produced for some time, color fiche have only recently become available.[1] Since color fiche are also inexpensive, progress against the aforementioned problems can now be made.

Fiche may be prepared for anatomical pathology by photographing the external surface of the unopened gross specimen, the cut surface of the specimen, and a close-up view of the cut surface. Histologic slides of the lesion are then made and these are photographed without magnification, with low power magnification, and with high power magnification. This allows a sequence of images to be assembled that begins with the gross and proceeds to the microscopic at whatever magnifications are appropriate. The student may thus visualize the lesion in a sequence of related projections. The advantage of this is that he does not lose his orientation, and the microstructure becomes wedded to the gross alteration in a single morphologic concept.

In some conditions the critical observations are too fine to be observed by the light microscope. An example is the glomerular change of membranous glomerulonephritis. As electron microscopy advances, additional characteristic lesions are apt to be found. It is as easy to include an electron micrograph in the fiche as it is to include a high-power magnification with the light microscope. Thus fiche tend to bring together at one time and place a variety of pictorial presentations that range from the gross on the one hand, to the highest powers of magnification on the other. This range exceeds in capability of the standard light microscope and improves the conceptual understanding of the student.

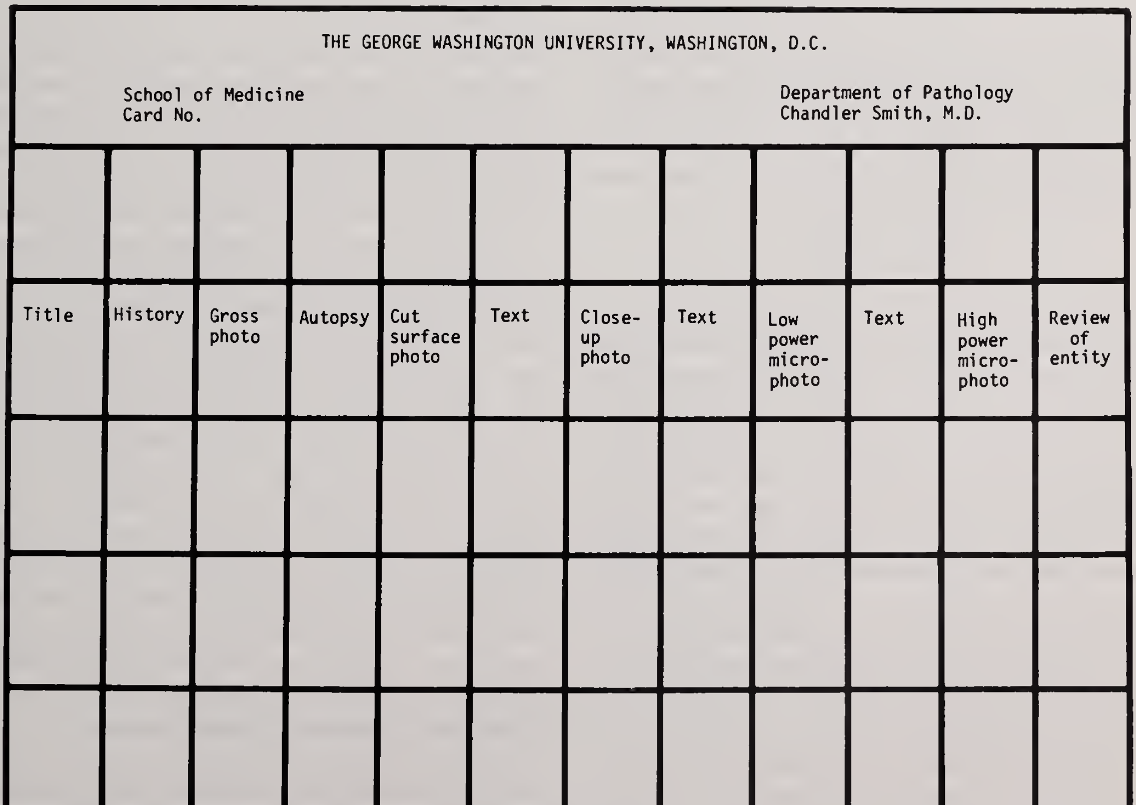
---

* From the George Washington University Medical Center, Washington, D. C., 20037

In order to guide the student and insert clinical information into the pictorial sequence, pages of written text are also photographed and interspersed between the color photographs. In each panel, proceeding from left to right, the textual frames include a title that can be read without magnification, a resume of the clinical history, a review of the autopsy findings, 3 frames pointing out what the observer should see in the accompanying photographs, and in the last frame, a concise review of the clinical and morphologic features of the entity depicted in that panel. Thus the student in progressing through this sequence learns about the clinical condition of the patient, the findings of the autopsy, the gross and microscopic nature of the lesion, and the main features of the condition as they usually occur. He thus acquaints himself with the condition in a clinical context involving a single patient, and in a morphologic context that merges gross and histologic change in a single unified concept.

A standard 4 X 6 inch fiche includes a total of 60 frames arranged in 5 horizontal panels of 12 frames each. Five separate lesions are presented on each fiche, 1 for each horizontal panel of 12 frames. All of the 5 panels on a single fiche relate to the same anatomic system, and the first panel for the first fiche for each system represents the normal structure and function for that organ. This allows the student to refresh his memory of the gross and histologic appearance as well as to recall the functional importance of the various parts. The lay-out of a fiche, as produced at The George Washington University, is shown in figure 1.

Fiche are examined in hand-held or desk-top readers. A reader that provides bright illumination, clear image, and low cost is available†. The fiche is placed in a moveable device that allows any frame to be moved easily onto the screen. Viewing is done best in a darkened room; the image on the screen is about 8-1/2 X 11 inches. Students may wish to purchase their own fiche and readers, or medical school may wish to provide readers as permanent laboratory



THE GEORGE WASHINGTON UNIVERSITY, WASHINGTON, D.C.

School of Medicine
Card No.

Department of Pathology
Chandler Smith, M.D.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| Title | History | Gross photo | Autopsy | Cut surface photo | Text | Close-up photo | Text | Low power micro-photo | Text | High power micro-photo | Review of entity |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

FIG. 1. Each Card measures 4 x 6 inches and consists of 5 horizontal panels. Each panel consists of 12 frames, regularly arranged in the sequence shown.

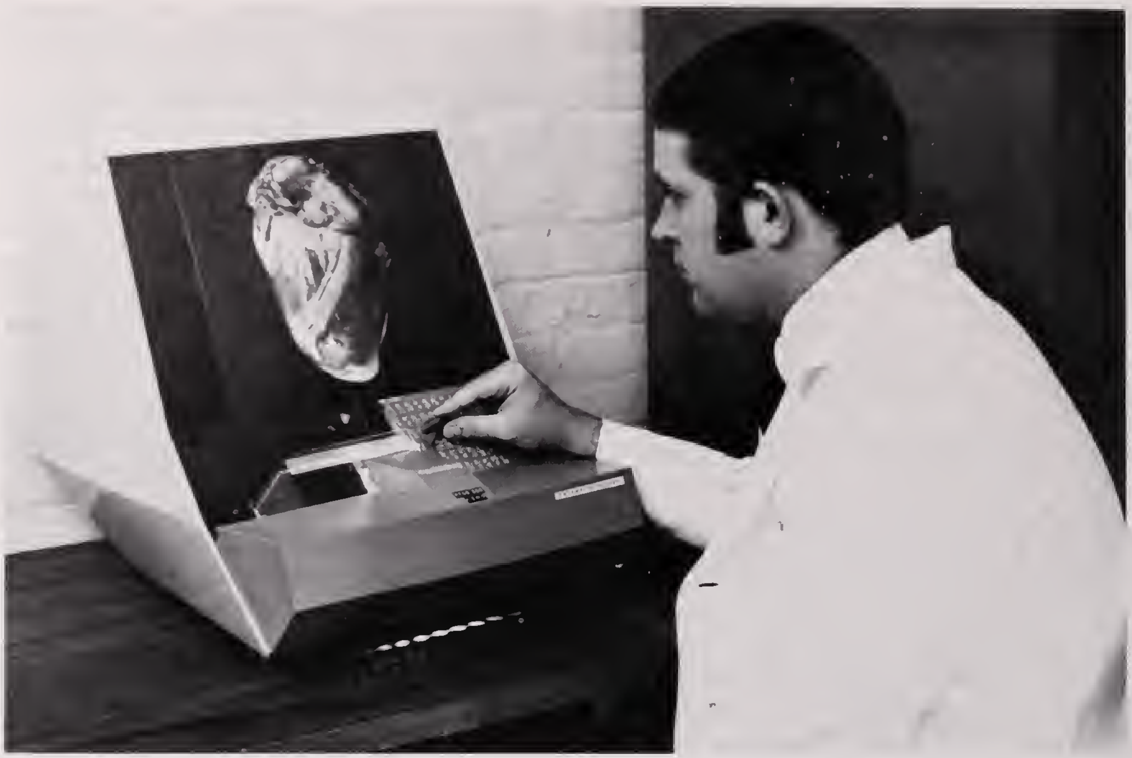


FIG. 2. Student examining color fiche in the EASAMATIC Viewer, Eastman Kodak Co.

equipment. Each individual fiche is enclosed within a transparent mylar envelope that protects the surfaces from scratches. A student examining a fiche in a desk reader is shown in figure 2.

### The Advantages

The use of fiche provides advantages for the student and the faculty. The student is provided with a way to examine the gross appearance and histologic structure of the same lesion at the same time. Moreover, since the images are all in color a life-like quality is preserved and all views are taken so as to illustrate characteristic features. Thus the student cannot fail to merge the gross and microscopic features in a unified concept and he cannot fail to associate these features in a clinical context. In addition, the process of learning may take place at his own time and at his own rate so that convenience is allowed and the regimentation of a fixed laboratory schedule is avoided.

The fiche are projected on a large screen that may be viewed simultaneously by 2 or more persons. Thus an instructor and student may examine the same image as it is commonly displayed before them. This is an improvement over the usual arrangement in which the student first looks into the microscope, then gets up, the instructor sits down, and this alternating processes continues or is replaced by one-eye searching by either party as the seated member leans out of the way. In this practice the 2 observers can never be sure they are viewing exactly the same structure, since whatever is seen must be independently viewed by each member.

At the end of the second year when the student completes his course in pathology it is customary that slide sets and syllabi be returned to the department. From that time forward the student has no ready access to lesions he may wish to reacquaint himself with as he progresses into the clinical years. With color fiche, that access is never lost since the fiche belong to him and the review may be easily undertaken. Review is useful for puzzling clinical situations and for departmental, state, and specialty board examinations. Fiche are also appropriate for practitioners who may wish to refresh their recollection of anatomic pathology with respect to the differential diagnosis of certain patients.

The possibility is also foreseen that color fiche in pathologic anatomy and perhaps in other specialities may have a place in postgraduate teaching. Since the fiche are light and easy to mail, the central advantage is the availability of abundant color illustrations and

---

† DASA Corporation, Andover, Mass.

text that may "go" to the physician without the necessity of his attending a meeting or complying with a fixed schedule.

Advantages may also be realized by the faculty. A better concept is available to the student by presenting a clinical-gross-microscopic and review combination than by presenting each of these aspects at different times so that they tend to become disconnected from each other. In one reader now available‡, the image of each frame can also be projected before the class prior to individual student examination. This allows the instructor to comment on the various gross and histologic photographs, adding points of interest from his own experience. It allows a dialogue between the students and the instructor with respect to the features of each of the lesions presented. In this way the instructor may insert his own personality into the proceedings and a student does not feel altogether relegated to the teaching "machine". The teaching exercise is thus elevated from a purely passive experience to a partially active one.

While the fiche may be used for laboratory exercises or for the illustration of lectures, they are not intended as a replacement for conventional methods of teaching. Thus, attendance at autopsies and the study of fixed gross specimens are encouraged in the usual way; the fiche are suggested only as a supplement to these usual methods. Nor are the fiche presentations comprehensive; they are intended to acquaint the student only with the outlines of the topic so that reading will be stimulated and the basis for a comprehensive understanding established.

A future prospect, however, is that with a growing library of color fiche the use of microscopes and slide sets may be partially replaced with fiche and readers. Departments would possibly benefit from this change because the need to prepare and maintain 200 to 300 histologic slides for every student in every second-year class would no longer be necessary. In this connection, it is pointed out that no central agency can produce all of the slides for all of the students; it is a task that must be undertaken separately by each department. A central agency can, however, produce color fiche for as many departments as might find them useful.

With extensive reliance on fiche, the medical student might escape the need to equip himself with a microscope for the course in pathology. At about $500 per microscope, and 100 students per class, a considerable expenditure is required although this is offset by rental practices at some schools and by the passage of microscopes from class to class so that the cost of new instruments does not have to be met each year. Nevertheless, some expense recurs each year at each school, and there are more than 90 medical schools presently operating in the United States. In contrast, portable desk readers§ are presently available at approximately $90 which amounts to under $9,000 per class. Since at least 2 students may share 1 reader, this cost may be at least halved.

While departments may provide readers for students, the increasing popularity of condensing information to fiche form suggests that students may wish to purchase their own. Were this to develop, the departments of pathology would nevertheless maintain demonstration microscopes and histologic slide sets for interested students, and their use would be encouraged just as the student is presently encourged to examine kodachrome photographs or fixed gross specimens. In this connection it is thought to be advisable that an early laboratory exercise in the pathology course be the preparation of a small number of histologic slides and their examination with the microscope. Thus the student, and later the intern and house officer are acquainted with the microscope and the histologic slide and are able to use them at any stage of their training even though some of their knowledge of morphology was gained in the pathology course by the use of color fiche.

It is to be emphasized again that the fiche are intended only to give the outlines of the topic and a perspectful grasp of it so that the student is stimulated to read and be better prepared to understand lectures and other presentations.

Although the preparation of color fiche requires many steps, the final product is a master copy and is reproducible in virtually unlimited numbers. Thus a single agency may provide fiche for many departments of pathology. Economy is gained by this practice. This is an improvement over the preparation of gross specimens and slide sets individually at each school. It is an undertaking that cannot be easily or inexpensively centralized. Economy is also gained at those foreign universities whose funds may be scarce, microscopes limited, and specimens inadequate. Fiche are especially useful where autopsy examinations are prohibited by religious or other convictions.

It is perhaps alarming to suggest that pathology can be taught with considerably less reliance on the microscope than has been customary. Yet the objective is not to embellish a fascinating laboratory

*(Continued on page 288)*

---

‡ Easamatic Reader, Eastman Kodak (Fig. 2).

§ DASA Corporation, Andover, Mass.

**Where has all the money gone?**

It just goes.

You shake your head.

You see it slip out of your hands and you worry.

Instead of worrying, why not do something about your money? Save some. Painlessly.

Join the Payroll Savings Plan where you work.

Your money will add up faster than ever before, because now there's a bonus interest rate on all U.S. Savings Bonds. Now E Bonds pay 5½% when held to maturity of 5 years, 10 months (4% the first year). That extra ½%, payable as a bonus at maturity, applies to all Bonds issued since June 1, 1970 . . . with a comparable improvement for all older Bonds.

Get a grip on your money the Payroll Savings way. It's an easy way to see your money grow instead of go.

UNITED STATES SAVINGS BOND
THE UNITED STATES OF AMERICA
FIFTY DOLLARS
50
SERIES E
L 0 000 000 000 E
NOT TRANSFERABLE

Bonds are safe. If lost, stolen, or destroyed, we replace them. When needed, they can be cashed at your bank. Tax may be deferred until redemption. And always remember, Bonds are a proud way to save.

UNITED STATES SAVINGS BONDS

**Take stock in America.**

Now Bonds pay a bonus at maturity.

The U.S. Government does not pay for this advertisement. It is presented as a public service in cooperation with The Department of the Treasury and The Advertising Council.

# The girth control pill

# Tepanil® Ten-tab®

(continuous release form)

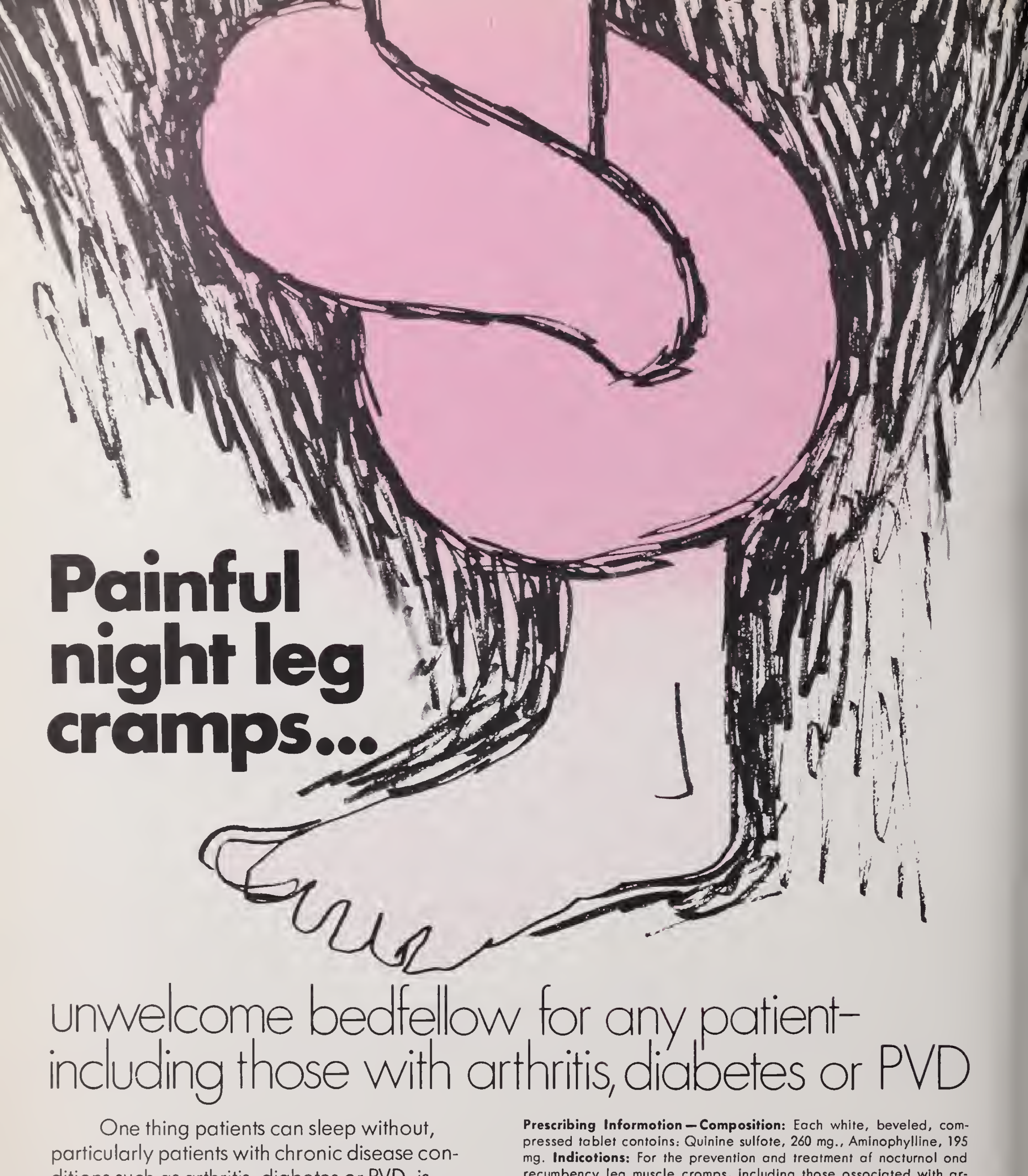
**diethylpropion hydrochloride, N.F.)**

Vhen girth gets out of control, TEPANIL can provide sound upport for the weight control program you recommend. EPANIL reduces the appetite—patients enjoy food but eat ess. Weight loss is significant—gradual—yet there is a relavely low incidence of CNS stimulation.

**ntraindications:** Concurrently with MAO inhibitors, in patients hypersensitive to s drug; in emotionally unstable patients susceptible to drug abuse.
**arning:** Although generally safer than the amphetamines, use with great caution in tients with severe hypertension or severe cardiovascular disease. Do not use dur- first trimester of pregnancy unless potential benefits outweigh potential risks.
**lverse Reactions:** Rarely severe enough to require discontinuation of therapy, unеasant symptoms with diethylpropion hydrochloride have been reported to occur relatively low incidence. As is characteristic of sympathomimetic agents, it may casionally cause CNS *effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hemotopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.
**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-107/4/71/U S PATENT NO 3,001,910

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144



# Painful night leg cramps...

## unwelcome bedfellow for any patient–including those with arthritis, diabetes or PVD

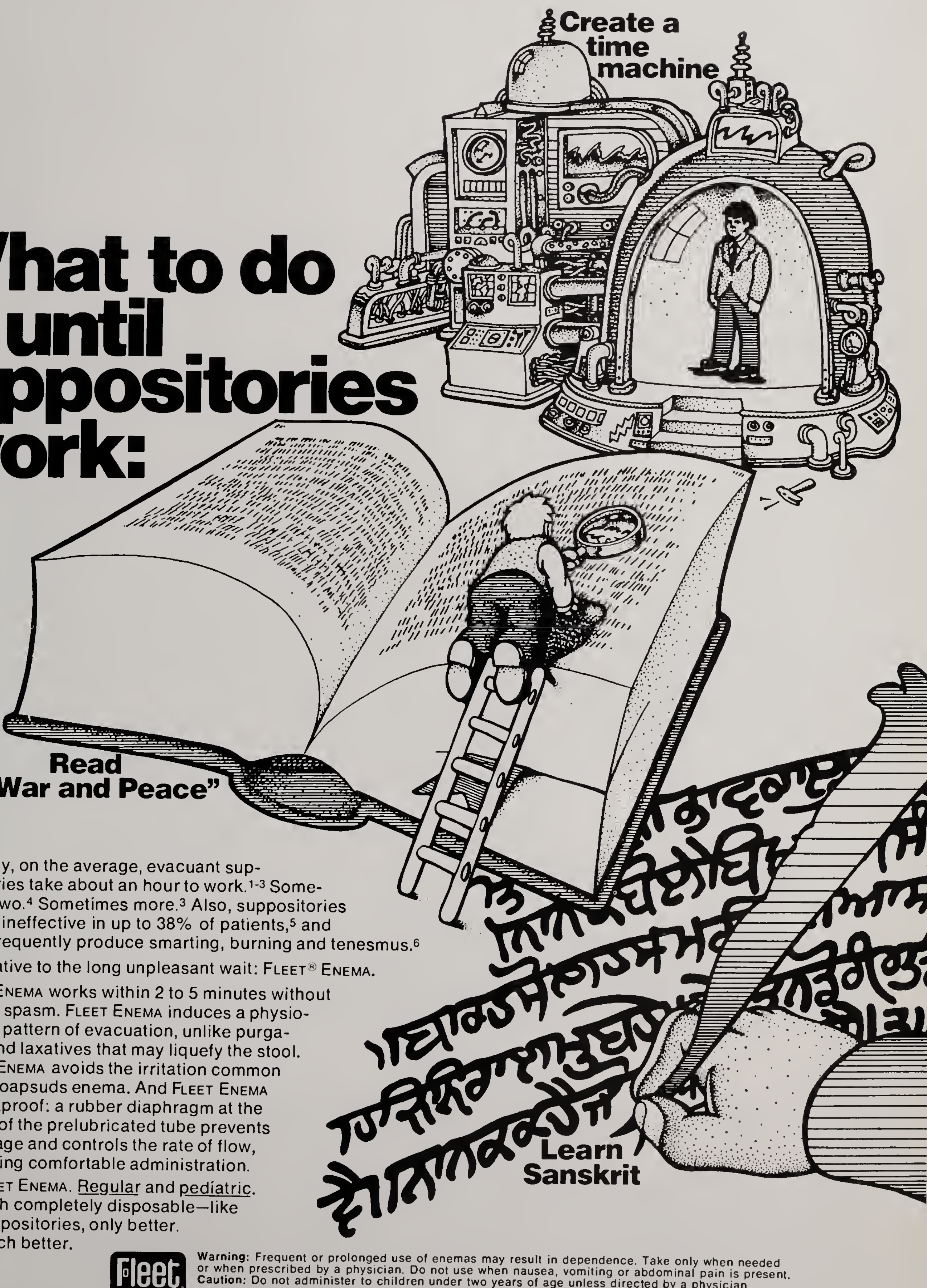
One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

**Prescribing Information—Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**

**Quinamm**™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)

Q103 2



**What to do until suppositories work:**

Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: Fleet® Enema.

Fleet Enema works within 2 to 5 minutes without pain or spasm. Fleet Enema induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. Fleet Enema avoids the irritation common with soapsuds enema. And Fleet Enema is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

Fleet Enema. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

C. B. FLEET CO., INC.
Lynchburg, Va. 24505

Fleet
pharmaceuticals

**Warning:** Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present. **Caution:** Do not administer to children under two years of age unless directed by a physician.

**References:** 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.

# His makeup is unique by tradition. His ulcer treatment is unique by tradition, too.

In the world of entertainment, a clown's makeup remains the exclusive property of its originator. Time has established that tradition. In the treatment of ulcers and other gastrointestinal complaints, time has established Pro-Banthīne as a tradition too.

Few drugs can boast a longer successful run. Introduced 17 years ago, this drug is a veteran gastrointestinal performer.

Pro-Banthīne stars in the treatment of peptic ulcer, functional gastrointestinal disturbances, ulcerative colitis, hypertrophic gastritis, pylorospasm, acute and chronic pancreatitis, diverticulitis, biliary dyskinesia, hyperhidrosis, ileostomies, and colonic, ureteral or urinary bladder spasm. Its fame as an anticholinergic is worldwide.

When you want a performer you can count on . . . remember Pro-Banthīne. Tradition does.

SEARLE Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

# Pro·Banthīne®

(propantheline bromide)

## the traditional ulcer treatment

**Pro-Banthīne 15 mg.**
propantheline bromide

**Pro-Banthīne 15 mg.**
propantheline bromide
with
Dartal 5 mg.
thiopropazate
dihydrochloride

**Pro-Banthīne 15 mg.**
propantheline bromide
with
Phenobarbital 15 mg.
warning:
may be habit forming

**Pro-Banthīne P.A. 30 mg.**
propantheline bromide
in time-release form

**Pro-Banthīne 7½ mg.**
propantheline bromide
Half Strength

# Pro·Banthine®
## (propantheline bromide)

*Indications:* Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.

*Contraindications:* Glaucoma, severe cardiac disease.

*Precautions:* Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

*Side Effects:* The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

*Dosage:* The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthīne is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

**Pro-Banthine® 15 mg.**
(propantheline bromide)
with

**Dartal® 5 mg.**
(thiopropazate dihydrochloride)

*Indications:* Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.

*Contraindications:* Glaucoma, severe cardiac disease.

*Warnings:* Pro-Banthīne with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.

*Side Effects:* Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.

*Adult Dosage:* One tablet three times a day.

**Pro-Banthine® 15 mg.**
(propantheline bromide)
with

**Phenobarbital 15 mg.**

Warning: May be habit-forming.

For *Indications, Contraindications, Precautions, Side Effects* and *Dosage* see Pro-Banthīne. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

**Pro-Banthīne P.A.®**
prolonged acting brand of propantheline bromide

For *Indications, Contraindications, Precautions* and *Side Effects* see Pro-Banthīne.

*Dosage Form:* Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

*Dosage:* The recommended initial dosage is one tablet in the morning and one at night.

084

SEARLE

Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

# President's Page

## LET GEORGE DO IT??

Urban area health needs are not being met—so say the daily newspapers. Everyone speaks about health care delivery and health maintenance organizations, but few of us have taken a close look at our own city's problems. The majority of us in the D.C. Medical Society practice in a manner that brings us in little contact with inner city residents. To be sure, a portion of our members are deeply engrossed in the health care problems of this group, but for most it seems like someone else's problem.

We have made an attempt to identify some of the city's needs. Our Child Welfare Committee and our Public Welfare Committee have been delving into many aspects of these problems. In addition, Doctor Crain and I have had several meetings with Doctor William Washington, Doctor Raymond Standard, Doctor Robert Dupont and with Mr. Phillip Rutledge to learn more about our communities' problems and ways to work together for an improved solution.

It is apparent that the public sector cannot do this job alone, and they look to the private sector of medicine for assistance. We represent a large, well-trained resource with much to offer the community. It has become apparent that changes have to be made in both the delivery of health services and in the method of paying for these services. Few of us are satisfied with the operation of Medicaid, its eligibility standards, or its other basic inadequacies. On the other hand, Medicaid is the major means of helping the poor obtain medical care. The concept of "clinic medicine" and "staff care" may have to be reviewed with new proposals to take its place. We have to be innovative in our thinking, not only in treating the poor, but in being able to better utilize our resources and individual talents. This will insure maximum benefit to both ourselves and our patients. New screening methods, health maintenance programs and physicians' assistants are among the newer ideas for us to consider. The facts are that there are just not enough of us to go around, and it is going to be a long time before the number of physicians catches up with the population spiral.

Despite the shortage of physicians and the degree of overwork we are all experiencing, there are a number of ways we can help the city meet its health needs. A small sacrifice on our part would be of great assistance to that sizable segment that is currently not being cared for. Participation in some of the health clinics throughout the city, examining teenagers who hope to enter summer camp, participating in the organized narcotics programs, and assisting in any of the dozen or more voluntary health projects going on currently within the community are some examples. For too long many of us said, "Let George do it." It is time we start helping to do it ourselves.

Marvin C. Korengold

**PROTEIN CONTENT** / 7 oz. Serving*

| | | | |
|---|---|---|---|
| Bean with Bacon | 6.8 | Green Pea with Ham (Frozen) | 7.6 |
| Beef | 8.0 | Hot Dog Bean | 8.4 |
| Chicken Broth | 5.5 | Pepper Pot | 6.1 |
| Chicken 'N Dumplings | 5.8 | Split Pea with Ham | 10.2 |
| Chili Beef | 6.2 | Vegetable Beef | 5.0 |
| Green Pea | 6.9 | Vegetable with Beef (Frozen) | 5.4 |

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

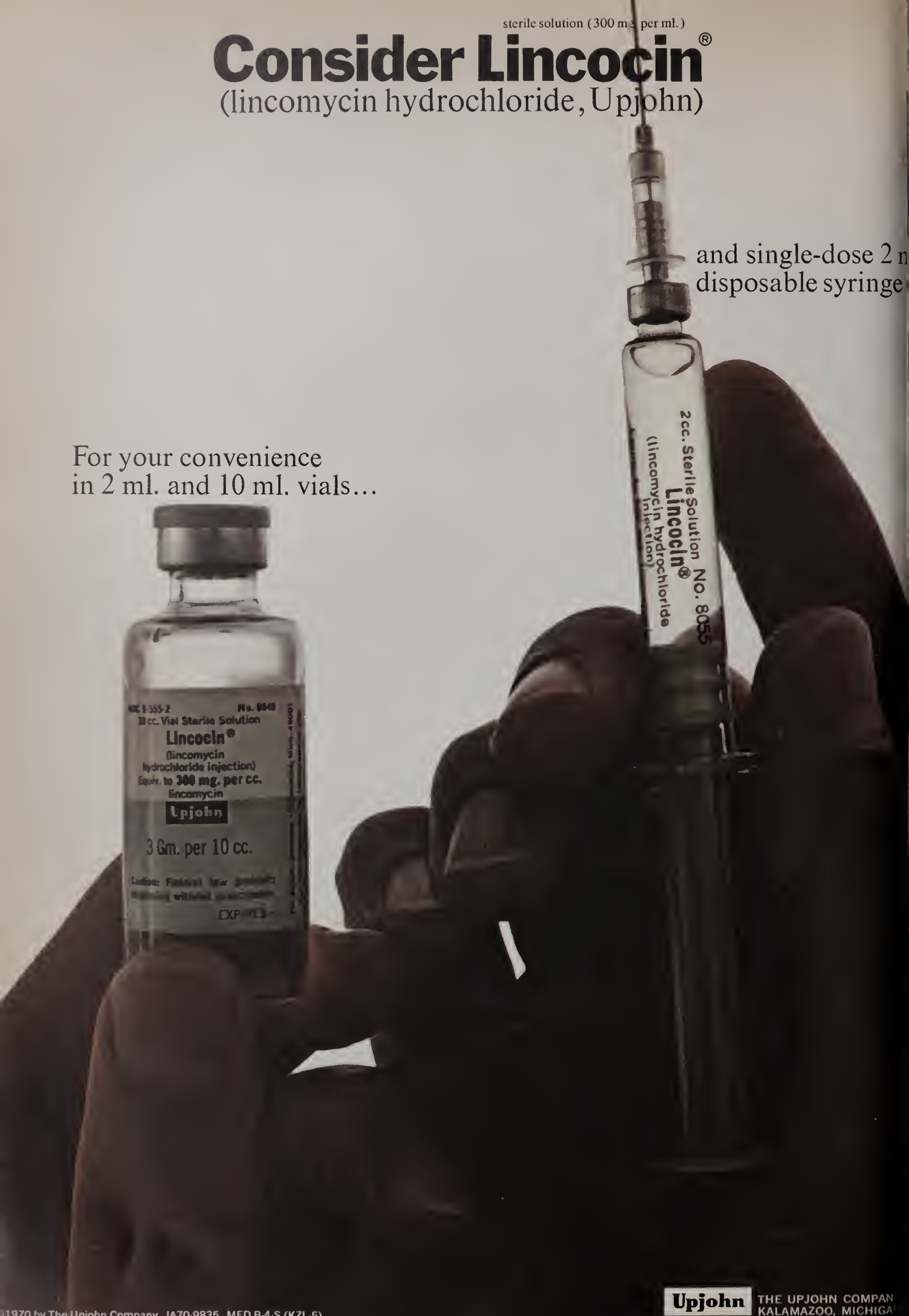
* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

here's a soup
for almost every patient and diet
.for every meal
and, it's made by Campbell

sterile solution (300 mg per ml.)

# Consider Lincocin®

(lincomycin hydrochloride, Upjohn)


2cc. Sterile Solution NO. 8055
Lincocin®
(lincomycin hydrochloride
injection)
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv. to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
EXP

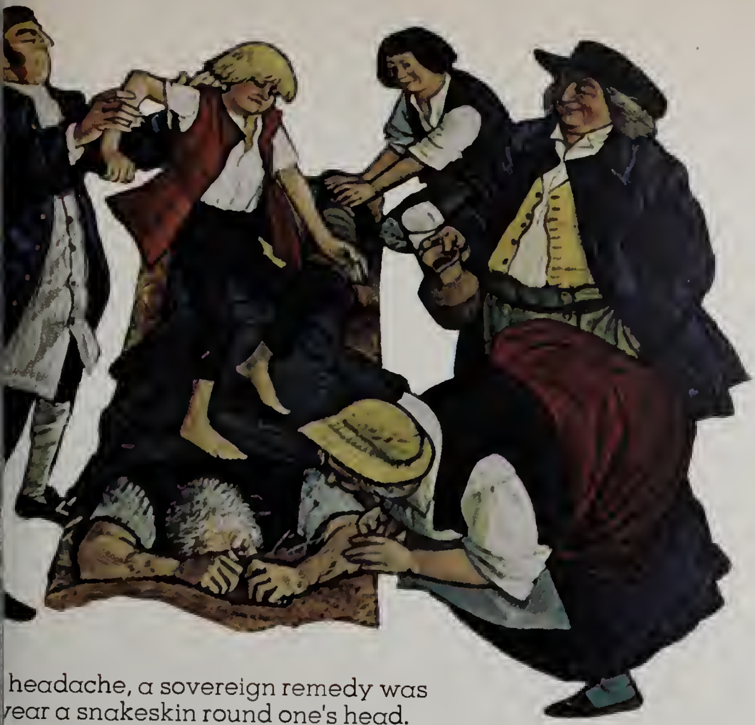
and single-dose 2
disposable syringe

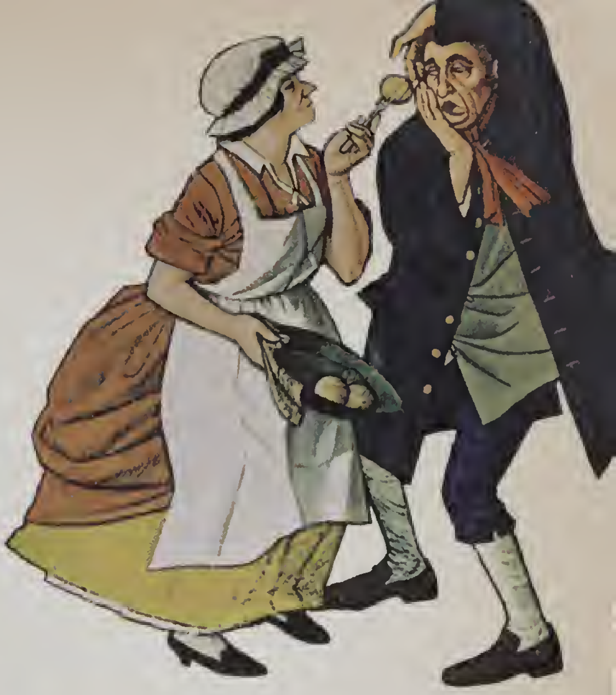
For your convenience
in 2 ml. and 10 ml. vials...

1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

**Upjohn** THE UPJOHN COMPAN
KALAMAZOO, MICHIGA

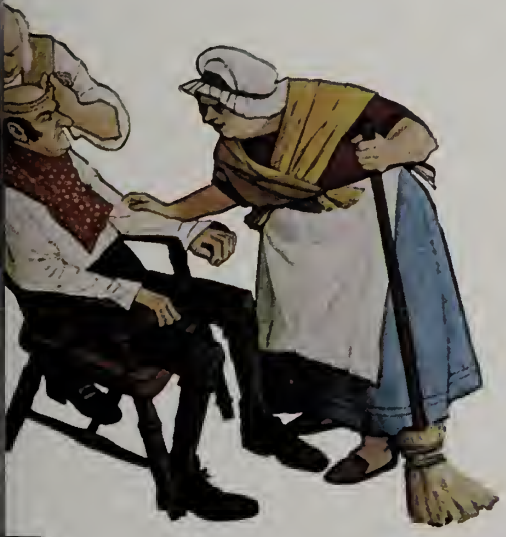
once-popular treatment for back pains
as to have the seventh son of a seventh son
and or walk on the patient's back.





The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

headache, a sovereign remedy was
ear a snakeskin round one's head.



# A realistic approach to pain relief

# Empirin'®

## ompound with Codeine
## hosphate gr. 1/2 No. 3

tablet contains:
eine Phosphate gr. 1/2 (Warning—
be habit forming), Phenacetin gr. 2 1/2,
rin gr. 3 1/2, Caffeine gr. 1/2.

**eeps the promise**
**pain relief**

Co.' narcotic products are
'B", and as such are available on oral
iption, where State law permits.

**BURROUGHS WELLCOME & CO. (U.S.A.) INC.**
**Tuckahoe, N.Y.**

# You can't fell a redwood with a hatchet

**With vitamins, too, relative needs determine the choice.**

A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a *high potency formula* will do.

THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.

**Theragran®**

**High Potency Vitamin Formula**

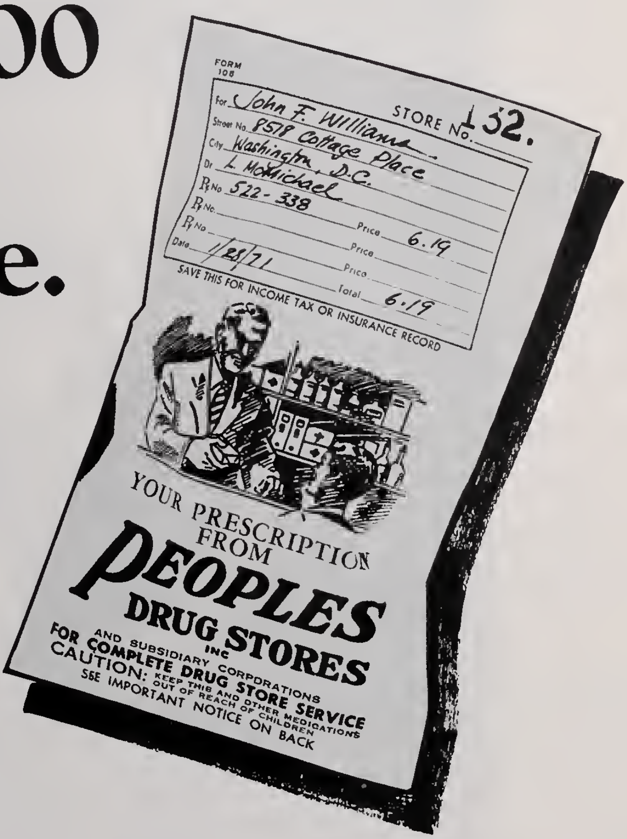
**Theragran®-M**

**High Potency Vitamin Formula with Minerals**

**SQUIBB**

"The Priceless Ingredient of every product is the honor and integrity of its maker."™

The bag that has earned more than 125,000,000 votes of confidence.



FORM 108
For John F. Williams STORE No. 152.
Street No. 8518 Cottage Place
City Washington, D.C.
Dr L McMichael
℞ No 522-338 Price 6.19
℞ No. Price
℞ No Price
Date 1/28/71 Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD

YOUR PRESCRIPTION FROM
PEOPLES
DRUG STORES
INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

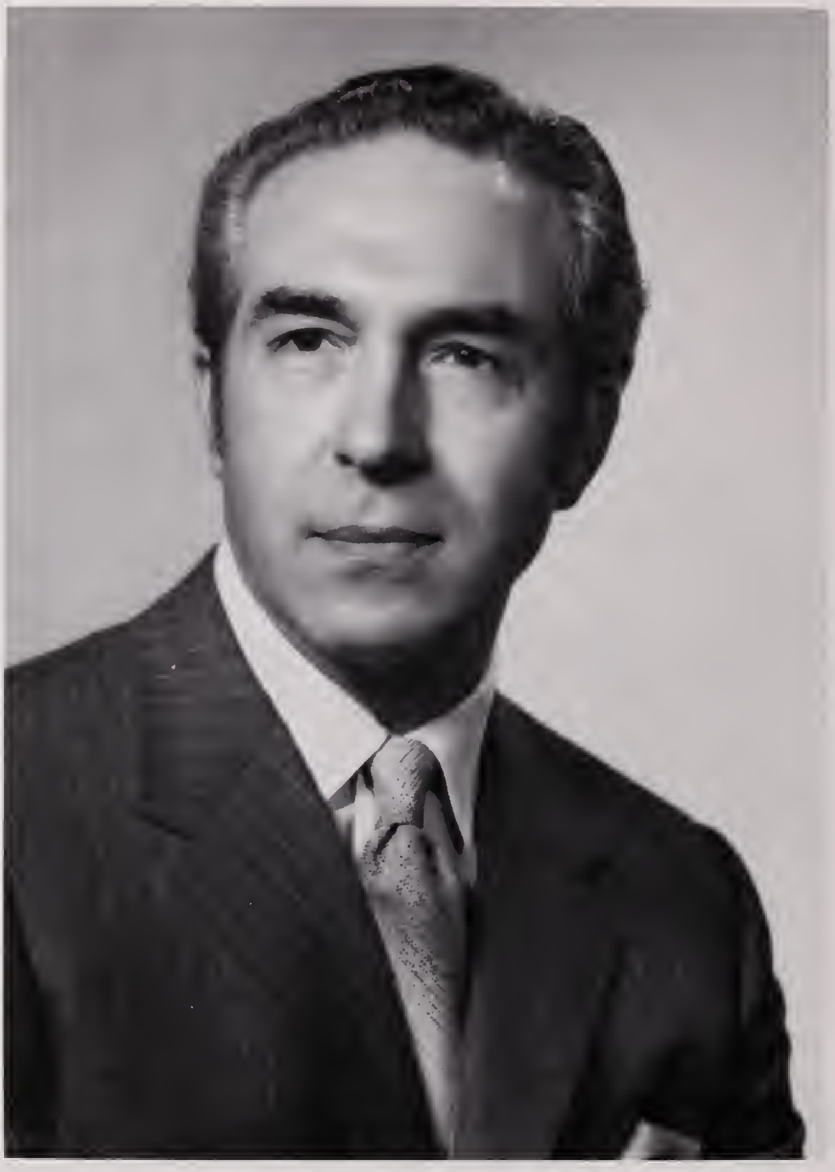
Filling *your next one* is as important to us as the 125,000,000 that came before it.

**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®
PRESCRIPTION DRUG STORES

WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.



FRANCISCO P. FERRARACCIO
Executive Director, The Medical Society of the District of Columbia

# FRANCISCO P. FERRARACCIO

On March 1, 1971 Mr. Francisco P. Ferraraccio became the fifth Executive Director of the Medical Society of the District of Columbia succeeding Mr. Thomas Sadler.

Born in DuBois, Pennsylvania he received his undergraduate degree from Allegheny College in Pennsylvania in 1949 and his Masters Degree in Medical Administration from the George Washington University in 1959. He was a pilot during World War II and a member of the legendary Flying Tigers.

Mr. Ferraraccio has been involved in the field of Medical Care Administration in the Washington area since 1950 when he joined the staff at the George Washington University Medical Center. In 1965 he became involved in the planning, construction and organizational phases of establishing the Cafritz Memorial Hospital. Most recently, his planning and organizational efforts resulted in the much publicized George Washington University Clinic; a group practice of the full-time clinical faculty of the School of Medicine. Also, during the past several years, he has been a project consultant to both physicians wishing to form groups and to hospitals striving for greater patient safety.

Currently, Mr. Ferraraccio is a member of the Board of Directors of the Arthritis and Rheumatism Foundation of Washington. He is a Fellow in the American College of Hospital Administrators, and holds membership in the American Hospital Association, the American Public Health Association and the Clinic Managers Association.

Mr. Ferraraccio is married to the former Margaret McCrory of Boston, Massachusetts. They have three sons: Blaise, 17, in his senior year at Good Counsel School in Silver Spring, Maryland; Francisco, 14, a freshman also at Good Counsel School; and Christopher, 5, who attends kindergarten.

During his limited leisure time, Mr. Ferraraccio's interests include flying, art history, architecture, sculpturing and an occasional set of tennis.

RMK

*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

DataMedics

**The result is total management control & increased cash flow**

DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:

- Billing
- Bookkeeping
- Collecting delinquent accounts
- Designing offices
- Leasing equipment
- Preparing insurance claim data
- Preparing payroll tax data
- Recruiting personnel
- Training personnel

**How?**
Consultation by appointment.

DM

**DataMedics, Inc.**
**National Headquarters**
**7979 Old Georgetown Road**
**Washington, D.C. 20014**
**(301) 654-7666**
**Cable/Medic**
**Baltimore (301) 792-4424**

**MAXWELL AND TENNYSON INC.**

M+T

*Pharmacists*

916 19th. St. N.W., Washington, D.C.

"WHERE PHARMACY IS A PROFESSION"

**BIOLOGICALS • VACCINES • SERUMS •**
**HYPO-ALLERGENIC COSMETICS •**
**ORTHOPEDIC APPLIANCES AND GARMENTS**
(QUALIFIED FITTERS)
**INHALATION THERAPY AND**
**ELECTRIC AIR PURIFIERS**
(QUALIFIED INHALATION THERAPIST)

***CONVALESCENT AIDS***

AVAILABLE FOR RENTAL OR SALE

**Phone 223-4711 or 223-9797/8**

**HOURS:** 8 am to 7 pm—Mon. Thru Fri.—Sat. 8 am to 2 pm
**CLOSED** Sunday and Holidays

# History of the Medical Society of the District of Columbia

## CHAPTER X

### The War Years

EDITORIALS APPEARING IN *The Medical Annals of the District of Columbia* prior to World War II reflect the thinking of not only doctors but of the public in general. The following are excerpts.

October 1939: "The tragedy of war is upon the world . . . Our country has made it clear it intends to remain neutral . . . We must be wary of the flood of propaganda that is sweeping the land."

June 1940: "People in this country today are undergoing an ordeal such as they have not experienced since the early days of the Republic. They are discovering, contrary to what was believed a few months ago, that the U.S. is not impregnable in the face of world disaster. In fact, our very security is threatened."

December 1940: "We have hardly recovered from the impact of one crisis before another supplants it. Many millions have listened anxiously to the unfolding of the most tragic drama of our time . . . if the profession is to live up to its obligations it must prepare for the inevitable difficulties that are ahead."

Few doubted in the early 1940's that the time was not far distant when we would become involved in the European war. Throughout the year preparedness was the slogan.

The American Medical Association created a Committee on Preparedness to "establish and maintain contact and suitable relationship with all governmental agencies concerned with the prevention of disease and the care of the sick, in both its civil and military aspects, so as to make available at the earliest possible moment every facility that the AMA can offer for the health and safety of the American people and the maintenance of American democracy."

The Committee made a canvass of physicians and learned that 38 per cent of the physicians in the District of Columbia (2,243, including those in the Government) had returned the questionnaires sent them. The majority expressed willingness to serve the country in any capacity should the need arise.

The Medical Society's Committee on Medical Resources proceeded with its own plans to meet any medical emergency in the District of Columbia. It planned to ascertain how many physicians were already in the military services and what steps should be taken to protect the health of the civilian population. As to the latter, Dr. George C. Ruhland, Health Officer for the District, organized a committee to develop an adequate health program for the community. Appointed to the committee were leaders both in business and public health. Every important health group was represented.

Washington was thronged with an increasing number of Government employees. Wartime bureaus mushroomed. Housing was woefully inadequate, and in the emergency rent controls were put into effect. Renters could not be subjected to increased rents nor could they be moved against their will.

It was surprising that an epidemic did not result because living conditions in some parts of the city were deplorable. An example was a building adjacent to the Medical Society's original headquarters which was owned by the Society. A real estate firm was charged with management of the building and had rented most of the space to war-workers. Conditions in the building, Medical Society officials discovered accidentally, were not fit for human occupation, especially in the basement. A room had been rented to a Navy seaman, his wife and child, which was nearly bare of furnishings. There were no windows, and therefore, little circulation. Furniture consisted of an iron bed on which the small child played, and a chair. An old woman, it was discovered, was living in the furnace room, which she had curtained off. The Medical Society appealed to the Sanitation Department to have these occupants removed because of deplorable health conditions. The Department took no action, perhaps because there were no other living quarters available. It was a sad situation.

The Board of Trade estimated in late 1941 that 10,000 workers and their families were arriving in Washington each month. It was estimated by the press that there would be an increase in population of 25,000 before many months. As the war progressed many arrivals had to settle for sub-standard living conditions.

Naturally, practicing physicians in the District were concerned with these developments. The pressure on them grew as the population increased. There were also the outside demands by Selective Service, Civilian Defense, and Procurement and Assignment for Physicians for the Armed Forces. Of course, the greatest sacrifice was to be made by the physicians soon entering the military services, there being no certainty as to what the future held for them.

Evidence that war was imminent was the announcement in *The Journal of the American Medical Association* that in January, 1941 the AMA would publish a new medical journal, *War Medicine.* It was stated that the new publication would contain abstracts of medical articles of military interest. State medical journals throughout the country were becoming "Military-minded" and devoting special issues to this subject.

In an address before the Medical Society on March 5, 1941 Dr. Nathan B. VanEtten, President of the American Medical Association, declared:

". . . Let us keep our eyes open and our ears alert to our own opportunities for patriotic service. Let us not bury our heads in the sand. Let no one lull us to sleep with stories of security. Let us rise to the common responsibility with renewed energy.

"The autocratic quackery of Hitler, Stalin and Mussolini must be resisted with all our strength."

## Selective Service

At the request of Brigadier General Albert L. Cox, Director of Selective Service for the District of Columbia, a canvass was made of Medical Society members for the purpose of enlisting volunteers to examine draftees. Two hundred and sixty-two responded. From these a drawing was made for examining physicians for 25 districts in Washington, except the 11th, 12th, 15th and 19th, to which Negro physicians were chosen by the Medico-Chirurgical Society of Washington.

The names of physicians selected were submitted to General Cox who forwarded them to the District Commissioners, who in turn submitted them for approval to the President of the United States. This procedure was followed until the local board examining system was discontinued. The same procedure was also followed with respect to the Advisory Committee of Specialists.

General Cox, a tall, soldierly-appearing man with a booming voice, was highly pleased with the performance of the examining physicians. Lt. Colonel A. Clagett Gray, a soft-spoken man who had served with distinction in World War I, was the State Medical Officer for Selective Service in the District. His self-effacing personality was misleading, for he discharged the duties of his office with authority and effectiveness.

In January 1941 Dr. Leonard G. Rowntree, a Colonel in the Medical Reserve Corps, became Chief of the Medical Division of the National Selective Service System. Dr. Rowntree had been Associate Professor of Medicine at Johns Hopkins School of Medicine and Professor of Medicine at the University of Minnesota. He had also served as the Chief of the Medical Division of the Mayo Foundation. Prior to his appointment, Major Robert A. Bier, a member of the Medical Society, had been Acting Chief of the Division. He was now made Assistant Chief under Colonel Rowntree.

As will be seen later, Colonel Rowntree was a man of ideas, some of them visionary. However, his tenure was marked by improvement in his department. A sandy-haired, scholarly man, he had received an assignment far different from those in which he had previously been involved. Although loquacious, he apparently was not always comfortable in his new role.

In the beginning, physicians examining draftees or, as Colonel Rowntree called them, "registrants," developed procedures adapted to the hospitals in which they worked. "Without exception," Colonel Gray stated, "they showed ingenuity and executive ability." Frequently they sought the assistance of specialists who served without official status. Later, specialists were appointed to Medical Advisory Boards.

Hospitals not only made their facilities available without compensation but provided nurses and other personnel as well. Clerical work was done by medical students.

At first physicians devoted only one night a week, or one night every other week, to examinations. As the number of draftees increased they were obliged to set aside two or three evenings a week for this purpose. As a result they found it difficult to carry on their practices. Two things were urgently needed—a standard examining procedure and a greater number of examining physicians.

On March 25, 1941 Drs. Worth B. Daniels, Lewis C. Ecker, and Linn Cooper appeared before the Medical Society's Committee on Medical Resources and presented a petition signed by 57 members of the Society requesting that the Committee "formulate some plan whereby the work involved in the defense program will be more generally shared by members of the Society." The burden of examining draftees was falling on 139 physicians and 12 dentists, serving in six hospitals. One hundred draftees were being examined at each hospital two nights a week. It was suggested to the Committee that it designate additional physicians to be on duty for a specified period, as was ordinarily done in hospitals. Additional appointments were made as suggested and the recommendation in regard to periods of service approved.

In a letter to Dr. Daniel L. Borden, then President of the Medical Society, General Cox expressed his appreciation to the Society for its help.

He said, "The experience of the past several months has clearly demonstrated that one of the wisest decisions I have made was to make no representations for the appointment of any physician for service under the provisions of the (Selective Service) Act unless he was recommended by your Society."

It was in March of 1941 that Colonel Rowntree decided to appoint a Medical Advisory Council to National Headquarters of the Selective Service System. Several officers of the Medical Society were asked to serve. The Council consisted of the following:

Dr. F. X. McGovern, Chairman of the Executive Board of the Medical Society; Dr. Henry C. Macatee, delegate from the District of Columbia to the AMA House of Delegates: Dr. Thomas S. Cullen, Professor Emeritus of Gynecology, Johns Hopkins Medical School, and Trustee of the AMA; Dr. Harvey B. Stone, Associate Professor of Surgery, Johns Hopkins Medical School, and a member of the AMA Committee on Preparedness; Theodore Wiprud, Executive Director and Secretary of the Medical Society; and Major Robert A. Bier, Secretary of the Council. Colonel Rowntree was, of course, the Chairman.

At its first meeting on April 1, 1941 the Council was greeted by General Lewis B. Hershey, Director of the National Selective Service System. Colonel Rowntree led the discussion and stated: "Improvement in the national health will be the greatest contribution to come out of the whole (Selective Service) effort." He directed attention to the large percentage—40 to 45 per cent—of draftee rejections because of physical and mental disqualifications. He proposed a plan for "prehabilitation" of draftees.

The Selective Service System had been charged with obtaining 16,500,000 men for the Armed Forces between the ages of 21 and 36. They had to meet physical, mental, and moral standards. Colonel Rowntree's "Prehabilitation" plan was to have: (1) registrants familiarize themselves with the physical standards required, (2) registrants apply to their local physicians and dentists to correct defects, (3) family physicians and dentists to correct the defects if they were remediable, and (4) registrants to carry certification of prehabilitation to local board and induction board.

He emphasized the importance of maintaining the normal relationship with physicians and dentists and that an appropriate committee in each state be appointed representing all participants in the prehabilitation program.

Questions were raised as to its practicability and whether reqistrants would have the desire to be rehabilitated to become acceptable to the Armed Forces. Nevertheless, a survey in the District of Columbia was decided upon to determine the disabilities of the registrants and the costs of their being rehabilitated.

At first it was decided that the survey should be made in the District of Columbia under the direction of the Medical Society's Committee on Military Affairs, but General Hershey ordered that it be made under the Supervision of Lt. Colonel Gray, State Medical Officer of Selective Service. Several organizations were designated to cooperate in this effort.

Because it was contemplated that the plan, if found feasible, would be carried on throughout the country, a national conference was held attended by leaders in medicine and in public health. General Hershey was certain that Congress would appropriate funds for the project.

A cost study of rehabilitating registrants in the District of Columbia was made by the Medical Society's Committee on Military Affairs, and its findings were submitted to Lt. Colonel Gray, who forwarded them to William E. Leahy, Director of Selective Service, who had succeeded General Cox. Mr. Leahy in turn submitted the study to General Hershey.

The report on the study, which appeared in the February 1942 issue of the *Medical Annals of the District of Columbia* contained some surprising information, the most significant being that 51 per cent of the 620 registrants interviewed stated that they would be willing to have their defects remedied so that they might enter the Armed Services. Costs of correcting the medical defects were estimated at $33,941, or $118.62 per registrant; dental defects, $9,502, or $82.63 per registrant.

Needless to say, the Executive Director of the Medical Society and his staff had devoted many hours to the study. They felt rewarded when President Roosevelt issued an Executive Order authorizing the Director of the Selective Service System to plan, establish and carry out the program, having as its purpose the physical rehabilitation of registrants for training and service in the armed forces of the United States.

Thereupon General Hershey wrote Mr. Leahy suggesting that applications be taken from physicians, dentists, and hospitals wishing to participate in the rehabilitation program. Mr. Leahy instructed Lt. Colonel Gray to contact the Medical Society's Committee on Military Affairs which voted that examining physicians and members of the Medical Advisory Boards should have the first opportunity to apply.

The record does not show what happened to this undertaking. Thereafter the Council which had met regularly ceased to function. Because of the demands of the Armed Forces and the pressure of building a large Army, little was heard thereafter of "prehabilitation." There had been a tremendous effort put forth without tangible result.

In December of 1941 General Hershey had ordered the discontinuance of Induction Centers and substituted Army Examining Centers. District registrants thereafter reported to Ft. Myer. Va. for examination. The Medical Society's Committee on Military Affairs was asked to submit names from which to select examiners. Dr. F. X. McGovern, Chairman of the Committee, chose captains "who were to see to it that four examiners were on hand in their specialties each day but Sunday."

Physicians assigned to local draft boards were unhappy about this arrangement. For now, they were only to screen registrants. This type of examination, they said, could be done by ancillary personnel. One registrant was reported to have said, "I'm informed that the doctors who conduct this farce are paid for their services." This was not true. Despite their dissatisfaction, physicians remained as examiners for their local boards. Colonel Rowntree explained in a statement to these physicians the reasons for the adoption of the screening process.

In appreciation for the services performed by examining physicians, ceremonies were held in the Interdepartmental Auditorium in the Department of Labor on February 14, 1946. William E. Leahy presided and introduced the Secretary of War, Robert P. Patterson, and Secretary of the Navy, James P. Forrestal, both of whom spoke briefly. J. Russel Young, President of the Board of District Commissioners, also made a few remarks, in the course of which he said he never had received a single complaint about examining physicians. Each of the 539 draft-board members and examining physicians received a Congressional Certificate of Merit and a Selective Service Medal. An additional number of examining physicians were honored for their services three months later, many of whom were or had been in the Armed Forces.

Special ceremonies were held, March 19, 1946 to honor those "who had helped formulate and administer the Selective Service Act of 1940 without compensation." General Hershey presented the Congressional Certificate of Merit and Selective Service Medals to the following: Drs. Winfred Overholser, Henry C. Macatee, Alfred N. Baggs, Roscoe W. Hall, and Mr. Theodore Wiprud. Mr. Leahy received the Certificate and Medal for Dr. Francis X. McGovern, who was unable to attend the ceremony.

At the first ceremony General Hershey said: "Over 14,500,000 physical examinations were performed throughout the Nation by these uncompensated physicians in the operation of the Selective Service System's procurement of manpower . . . The Nation is today expressing its gratitude . . ."

## Procurement and Assignment of Physicians

The AMA House of Delegates at its June 1941 meeting, on the recommendation of its Committee on Preparedness, adopted a resolution urging the U.S. Government to establish a control authority with representation of the medical profession, naming it the Procurement and Assignment Agency (later Service) for procuring physicians for the Army, Navy and Public Health Service and for the industrial needs of the Nation. Requested for deferment were medical students, interns, and essential teachers in medical schools.

On the basis of these recommendations, all acceptable to the Government, the Procurement and Assignment Service was established on October 30, 1941. Highly respected and an eloquent spokesman for the medical profession, Dr. Frank H. Lahey was made Chairman of the Directing Board. Associated with him were distinguished physicians from various parts of the country.

Dr. Francis X. McGovern, Chairman of the Medical Society's Executive Board, also became Chairman for the District Procurement and Assignment Service. He surrounded himself with prominent Washington practitioners. As elsewhere, P and A did not begin to function until early 1942. Dr. McGovern, a former Regular army surgeon and dedicated to his task, insisted on the availability of all who appeared before the committee requesting deferment. At this time little consideration was given to civilian needs. The Army needed physicians urgently.

At the time P and A began functioning in the District a recruiting team for the Army was given space in the Medical Society's building. The team consisted of a medical and a line officer. Major Sam F. Seeley, then Executive Officer of the National P and A, urged physicians under 45 to volunteer for Army service, and a considerable number in the District did.

A date which will be remembered by historically-minded physicians is May 12, 1942. On this date all physicians were required to register at one of the designated hospitals or at the Medical Society's building. The purpose was to determine the number of physicians in private practice who could be furnished the Armed Forces without jeopardizing the health needs of the civilian population. The initial response was fully up to expectations; 1,217 white and Negro physicians registered.

Paul V. McNutt, the handsome, white-haird Chairman of the War Manpower Commission, was dissatisfied with the slow progress made in obtaining the needed physicians. In addressing the AMA House of Delegates at Atlantic City on June 8, 1942 he complained: "The plain fact and conclusion is simply this. The Army and the Navy and the war industry have not gotten the doctors they need . . . and I appeal to you to make P and A work."

That P and A at its beginning came in for severe criticism is understandable. It had been hastily organized. On the one hand, state P and A committees seemed unable to satisfy the military clamor for doctors. On the other hand, there were charges that they had failed to safeguard the homefront.

Senator Claude Pepper of Florida, Chairman of the Senate's Committee on Education and Labor, charged that the confusion was due to P and A Service' "disjointed procurement policy." He said that the Armed Forces hoarded doctors and that there was "a serious dislocation of medical manpower" and a "tremendous overmilitarization at the expense of the civilian population." At the same time Mr. McNutt continued to complain of P and A's ineffectiveness. "Unfortunately," he said, "it has failed in its purpose. It has neither procured nor assigned."

Answering the criticism, Dr. Lahey said," I know that the P and A has made lots of mistakes, but, on the whole, medicine has done pretty well; it has met the demands."

It was already evident that in some states zealous P and A committees had been overenthusiastic. They were therefore curbed and required to evaluate the needs of the civilian population. The District P and A Committee was hampered because of lack of data with respect to civilian needs. However, it had provided 100 per cent of its quota for the Armed Forces.

Surveys to determine the civilian needs were finally made periodically to determine the needs of the Armed Forces as well as of the public. These were undertaken by the Medical Society and Antonio Ciocco and Isidore Altman of the Division of Public Health Methods of the Public Health Service. Their first report, made in November 1942, did not indicate any acute shortage of physicians in the District, but they said it was approaching its lowest safe limit and that further indiscriminate inroads would be felt.

The second study, by the same investigators, reported that in May 1945 the investigation disclosed an increase in specialists, but the overall number of physicians remained the same between 1943 and 1945. It was reported that there were now 60,000 physicians from various parts of the country in the Armed Forces. A study in 1947 showed a 45 per cent increase in the number of physicians in Washington since 1945.

In a generous mood Mr. McNutt expressed his appreciation for the sacrifice involved and the coöperation that was necessary on the part of physicians. So many physicians from the District of Columbia entered the Armed Forces in 1944 that recruitment in the Medical Society's building was discontinued. The Society was notified by Mr. McNutt that the Army recruitment of civilian physicians was no longer necessary. However, the Navy still needed 3,000 physicians.

Major General Norman T. Kirk, Surgeon General of the Army, had high praise for the medical officers of the Army. "The large number of physicians now in the Army volunteered for commissions without regard for their personal interests. The U.S. Army Medical Department is appreciative of the service they have given. Their removal from their usual practice also represents a sacrifice on the part of all civilians who have had to get along with less medical care than they had in peacetime."

Nearly 300 physicians from the District were commissioned in the Army, Navy and Air Force (Appendix II). They served with distinction in far-flung places of the world. Most were promoted in rank, and several were decorated for valor.

Beginning early in the War the Executive Director of the Medical Society sent newsletters to members. The response was enthusiastic. A large number of letters, following their clearance by the censor at the Pentagon, were published in the *Medical Annals of the District of Columbia.* In passing, it might be mentioned that at times the censor used scissors freely.

A long-time friend of the medical profession in Washington was Thomas R. Henry, science writer for *The Washington Star.* Early in our participation in the conflict he became war correspondent in Europe for his newspaper. One of his dispatches following Germany's surrender was directed to physicians in Washington. It was an eloquent description of the Nazi atrocities (Appendix III).

Several District physicians who had served in World War II remained in the Army Medical Reserve Corps and were called for duty in the Korean War in 1950. However, the demands on the Medical Society were negligible when compared to those of World War II.

At the close of the war in Europe in 1945, physician-veterans began to return to civilian life to pick up where they had left off, but times had changed. Many physicians in the Service who had not previously practiced in Washington but had been stationed in the Nation's Capital during the war decided to remain. Also, there was an influx of new practitioners. It was obvious that returning physician-veterans would encounter difficulties. The Medical Society set about to ease their situation.

## Physician-Veterans of World War II

Letters received from returning physician-veterans indicated their concern about a number of matters. Surprisingly, many were disturbed lest they be regimented under a Government system of medical care. Medical practice in the military services apparently did not appeal to them as a permanent career. There were also a number who said they would like to do private, group, or clinic practice. A number of general practitioners insisted they wanted to specialize.

Paramount in their minds was obtaining suitable offices, equipment, and automobiles (rationed during the War). Many had given up their offices upon entering the military services and had disposed of their equipment and automobiles. A few were fortunate in that their associates had held their offices for them until they returned. And some associates turned over to them receipts from their patients in their absence.

Every downtown office building was canvassed by the Executive Director of the Medical Society in an effort to obtain offices for returning physician-veterans. The membership was also canvassed with this object in view. Automobile agencies were contacted, and several promised that physician-veterans should have priority.

As early as the summer of 1944 members then in practice had been canvassed for the purpose of obtaining their assistance for returning physician-veterans. One hundred and forty-four out of 250 physicians in the medical buildings on Eye Street, N.W. responded, but only 27 stated that they could share office space. However, they had many suggestions, some rather surprising. A general practitioner said he would give a returning physician-veteran his home calls after 11 p.m., and another suggested establishing a loan fund to which each member who had not been in the Service would contribute five dollars. These suggestions were obviously not practical or encouraging, but the Medical Society's Committee on Medical Service had real accomplishments to their credit. Several offices and automobiles were obtained.

Understandably, returning physician-veterans did not feel that this was enough and formed a tight-knit organization known as the District of Columbia Physician-Veterans of World War II. They banded together for the purpose of mutual assistance.

The Observer wrote in the *Medical Annals,* June 1947:

"It must be apparent to even casually interested members of the Medical Society that far-reaching changes are taking place within the organization. The most significant is that the direction of the Society's affairs is passing from the hands of the 'elder statesmen' to a younger generation. This is shown by the recent election when all of the top offices went to physicians who are veterans of World War II. This is a natural development because the majority of physicians who remained on the home front during the war were middle-aged or past.

"There are many aspects of this situation that are most encouraging. Had our veterans been indifferent to their medical organization upon their return to civilian life, it would not only have seriously crippled our Society but would have been an indication that it had failed in its responsibilities. Fortunately, it succeeded in its efforts to retain the loyalty of members who served their country so faithfully in a crisis. Those who because of age or for other reasons remained in civilian life during the War should feel elated over this situation.

"It is not intended to suggest that our veterans should take over to the exclusion of their colleagues who were not in the service. The veterans themselves would not want it that way."

A new era in Medical Society affairs had begun.

bp
KONSYL
REG. U.S. PAT. OFF.
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
PLANTAGO OVATA COATING
MADE BY
BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 12 OZ.
bp
L.A.
REG. U.S. PAT. OFF.
FORMULA
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
Plantago Ovata Coating Dispersed in 50% dextrose.
A natural vegetable powder for treatment of constipation and non-specific diarrhea.
MADE BY
BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 14 OZ.

Sugar-free medication for the obese patient.

For the patient who requires maximum palatability.

the safe,
effective ways to promote
normal peristalsis

*in the treatment of constipation or diarrhea*

**Burton, Parsons & Co., Inc.** *Manufacturers of Ethical Pharmaceuticals Since 1885*
▪ WASHINGTON, DC. 20027 ▪ MONTREAL, CANADA ▪ MUNICH, GERMANY

# Editorials

## SEQUEL TO THE SESQUICENTENNIAL

This is George Washington University's sesquicentenniel year. Like the Federal metropolis about it, the University has had a steady growth in its central city setting. Three professors and 30 students launched Columbian College in 1821. Trustees of Columbian College immediately decided that the University should have a medical department. Medical instruction began in 1825 in a school designed to become "commensurate with the progress and demands of a rising metropolis and the improvement of service throughout the country." From this early beginning GWU has grown into one of the major educational centers of the United States. Of the 40,000 living GWU alumni, approximately 10% are graduates of the School of Medicine.

By tradition that now spans a century and a half, GWU has provided medical background for hundreds of physicians who have given high quality care to thousands of patients throughout our city, our country, and the world. Capable practitioners, internationally known educators, distinguished investigators and able administrators are well numbered among our graduates.

To prepare medical students and house staff to meet expanding dimensions in health care, the School of Medicine changed its curriculum from a fixed course to a University type of learning process. To encompass this concept and to extend opportunities to a greater number of students, new facilities are needed. The Northwest corner of the campus around the University Hospital and off Washington Circle has been selected as the site for development of the Medical Center. The new basic science building and medical library are now under construction. A concept of medical education formulated by the faculty to fit future medical needs will soon be in the process of transfer from outdated quarters on H Street to a specially designed basic science building and medical library.

We are now in the process of taking an immediate and long range look at how these facilities and others on the planning board may best serve the needs of medical students, health personnel and the world of people we serve. In view of the many facets of change in medical education and health care delivery, it is necessary that the faculty and administration constantly explore courses of action designed to meet the health science demands of an ever changing society. How GWU performs its mission in its new School will soon be determined for the decades ahead. The original goals of the School's founders are as timely now as when they were first expressed more than a century ago. We shall respond to the progress and demands of a "rising metropolis" and for "improvement of service throughout the country."

JOHN PARKS, M.D.
*Dean, George Washington*
*University Medical Center*

**KEOGH RETIREMENT PLANS**

Funded with Your Choice from a Wide Selection of Mutual Funds

Continuing Annual Service, Including Preparation of Tax Form 2950 SE

**EUGENE F. ROESSER, C. L. U.**

*Financial Services for Physicians*

1130 Seventeenth Street, N.W.
Washington, D. C. 20036

District 7–1114

# ►D.C. HEALTH NOTES

## Supplemental Foods Program

The Supplemental Foods Program in the District of Columbia is designed to provide selected nutritious foods to eligible persons in low-income families, who need additional food to prevent, correct, or improve nutritional deficiencies.

The District program was implemented in June 1969 by the D. C. Community Health Services Administration following Mayor Walter Washington's announcement of the plan. The mayor pointed out that "this program focuses on one of the most basic of all human needs—fundamental health."

Supplemental foods are made available to the District Government by the United States Department of Agriculture. The program is administered by the D. C. Community Health Services Administration, using its own facilities to distribute the food.

The free supplemental food is available to pregnant women, women who have had a baby within the last year, and children through 5 years of age, who are residents of the District of Columbia and are receiving medical care in health facilities of the D.C. Community Health Services Administration.

More than 21,000 bags of supplemental foods have been distributed each month to infants, pre-school children and adults participating in the program. Patients pick the food up at 11 conveniently located distribution centers.

Persons with Medicaid cards who are eligible for supplemental foods may be authorized to receive such foods by their private physicians. The food is available to eligible persons without regard to whether they are already participating in the Food Stamp Program.

Supplemental foods are nutritious and since proper food can help prevent illness, the D. C. Community Health Services Administration is encouraging as many eligible people as possible to use this cost-saving food.

Included in the supplemental foods program are evaporated milk, non-fat dry milk, canned meat or poultry, canned juice, cereal, canned vegetables, and corn syrup blend. Foods will vary from time to time depending upon the supply available. The foods are pre-packaged and sealed. They are marked for adult, pre-school child, or infant.

The Administration's Nutrition Services Division has developed recipes and menus and 2 booklets are now available: "Happiness Begins With Good Food," and "Jiffy Dishes, with Pot, Board, and Pan."

Nutritionists in the various facilities conduct demonstrations using supplemental foods. Some of the users of supplemental foods have developed recipes and menus and these too are available through the Administration.

For authorization to participate in the program, a patient may visit 1 of the public health facilities or her private physician, where at least 1 member of the family is receiving medical care. All eligible members of 1 family may sign up at the same clinic or with the family physician. An examination by the physician or review of the patient's medical record is made.

The patient selects the food distribution center most convenient for her to pick up the food. The name and address of the Center is stamped on the coupon book cover. The patient has only to sign a log sheet showing that the coupon book was issued. It is good for 6 months, and eligibility will be reviewed each 6 months thereafter.

A patient may obtain supplemental foods twice a month at the distribution center she has designated. A semi-monthly supply of food will be issued for each participant upon surrender of each person's coupon for the period.

Physicians who participate in the District's Medicaid program are urged to encourage their eligible patients to take part in the Supplemental Foods program.

Additional information on the program may be had by calling the Nutrition Services Division of the D. C. Community Health Services Administration, telephone 629-5321.

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*Associate Director, Department of Human Resources*

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036
CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

Hurricane Camille dumped up to 31 inches of rain on Virginia's Blue Ridge Mountains the night of August 19-20, 1969. She had already devastated the Gulf Coast from Louisiana to Florida, halted her northward journey over Kentucky and Tennessee, then headed eastward over West Virginia and Virginia.

*Cooperative Farmer*

*Emotional stress can be just as destructive to the individual as turbulent, ravaging flood waters are to land and property. Solfoton will contribute to the maintenance of a mental climate for purposeful living.*

# Solfoton®

SEDATION WITHOUT DEPRESSION

EACH TABLET OR CAPSULE CONTAINS:

Phenobarbital . . . . . . . . . . . . . 16 mg.
(Warning: may be habit-forming)

Bensulfoid (See PDR) . . . . . . 65 mg.

Precaution: same as 16 mg. phenobarbital

DOSAGE: One tablet or capsule every 6 hours will sustain mild sedation.

Available in three forms to satisfy prescribing circumstances:

| | | | |
|---|---|---|---|
| TABLETS | 100s | 500s | 5000s |
| CAPSULES | 100s | 500s | 1000s |
| TABLETS S/C | 100s | 500s | 4000s |

*Federal law prohibits dispensing without prescription*

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
*Manufacturers of Ethical Pharmaceuticals Since 1856*

# Thorazine®
brand of chlorpromazine

**versatility**
**quality**
**experience**

NOW THERE'S PRICE

Smith Kline & French Laboratories SK&F

**JOHN LEWIS SMITH, III**
**Legal Council, The Medical Society of the District of Columbia**

Mr. John Lewis Smith III became the new legal council to the Medical Society of the District of Columbia on January 1, 1971 succeeding Mr. Warren E. Magee.

Born in Washington, D.C., Mr. Smith attended Gonzaga High School in Washington, and the Lawrenceville School in Lawrenceville, New Jersey. He graduated cum laude from Princeton University in 1963, and received his law degree from the Georgetown University Law Center in 1966.

During his last year of law school he clerked with the Honorable E. Barrett Prettyman on the United States Court of Appeals for the District of Columbia Circuit. Following graduation from law school, he clerked with the Honorable Edward M. Curran, Chief Judge of the United States District Court for the District of Columbia.

A member of the D.C. Bar Association, Mr. Smith has been engaged in general practice of the law for over three years, and is currently an Associate with the firm of Frost and Towers.

He has been actively involved with the District of Columbia Society for Crippled Children having been a member of the Board of Directors for the past two years, and for the past year a member of the Executive Committee. He has also served as Chairman of the business community fund drive for the Washington Heart Association. In 1969 he headed the Annual Fund Drive for Downtown Buildings.

In his leisure time Mr. Smith's interests include reading historical biographies and best sellers, and playing golf. During the warmer months he enjoys the sun at Rehoboth Beach, Delaware.

## CLINICAL CENTER STUDIES

The cooperation of physicians is requested in the referral of patients for a controlled clinical trial of the treatment of advanced ovarian carcinoma being conducted by the National Cancer Institute's Solid Tumor Service at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Previously untreated patients with serous or undifferentiated ovarian carcinoma Stage III or IV (International Classification) are needed for this study.

Upon completion of their studies, patients will be returned to the care of the referring physician who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may write (including a brief clinical summary and representative slides) or telephone Dr. Vincent T. DeVita, Clinical Center, Room 12-N-226, National Institutes of Health, Bethesda, Md. 20014. Telephone: (301) 496-4916 or Dr. Robert C. Young, Clinical Center, Room 4-B-13, National Institutes of Health, Bethesda, Md. 20014. Telephone: (301) 496-2031.

The cooperation of physicians is requested in the referral of patients for clinical studies of intensive chemotherapy and radiotherapy being conducted by the National Cancer Institute-Veterans Administration Medical Oncology Service at the Veterans Administration Hospital, Washington, D. C.

Patients with proven lung cancer who have no prior radiotherapy or chemotherapy are needed for these studies. A limited number of suitable veterans and nonveterans will be admitted. Preference will be given to all patients with oat cell (small cell) carcinoma and to veterans with limited disease. Patients should live within driving distance of the VA Hospital, Washington, D. C.

Close collaboration with the referring physician is encouraged.

Physicians interested in having their patients considered for admission to these studies may write Dr. Heine Hansen, or The Attending Physician NCI-VA Medical Oncology Service, Veterans Administration Hospital, 50 Irving Street, N.W. Washington, D. C. 20422 or Telephone: 202-483-6666 ext. 6806 or 6807.

**MEETINGS, SEMINARS in refreshing country-estate atmosphere. Golf, tennis, lakes. Versatile new conference facilities for up to 250. Dining in historic Old Mill Room, new Tack Room (cocktails).**

*Write for Meetings Portfolio or call 703-296-2181.*

**THE BOAR'S HEAD INN**
Charlottesville, Virginia

## DOCPAC BRIEFS

### IT'S UP TO YOU

How medicine will be practiced in our lifetime will be decided in the next several years—and if you are not willing to become involved both financially and personally the type of medicine you practice will be decided for you by those who are willing to become financially and personally involved. Your greatest fear should be the loss of the personal relationship between doctor and patient which would necessarily follow if several of the bills which are now being presented were passed. It behooves every physician to read these bills, understand them, and then become involved with the programs which he thinks are best to maintain the personal doctor and patient relationship.

KENT A PETERSON, M.D.

# News & Personals

## SUMMARY OF EXECUTIVE BOARD ACTIONS

**Proceedings of February 22 meeting.**

Dinner was served for Board members in the Exhibit Hall of the Medical Society. Present were Drs. Henry D. Ecker, Chairman, William S. McCune, Frank S. Pellegrini, Marvin C. Korengold, Warren D. Brill, James E. Boland, John J. Hughes, C. Willard Camalier, Jr., and Mr. F. P. Ferraraccio, Secretary. Dr. Herbert P. Gates was present by invitation.

Immediately following dinner, the Chairman turned the meeting over to Dr. Herbert Gates who had asked for the opportunity to speak to the Executive Board informally about some contemplated changes in the questionnaire for Drivers License Applications. Dr. Gates pointed out that the paramount question was one having to do with mental disorders. He said that at present drivers permits were renewed every 4 years and that he preferred, therefore, that the question to do with mental and nervous disorders should be specific; i.e.: has the applicant had such mental disease within the past 4 years? Dr. Gates passed out the particular questionnaire cards which itemized not only this particular question but several other medical questions requiring yes/no answers. It was his wish that the yes/no questions be retained.

Following several questions which were posed to Dr. Gates and discussion thereof, the Chairman adjourned this portion of the meeting.

The executive session of the Board was called to order at 7:15 p.m. Minutes of the January 25 meeting were approved as submitted.

**Committee Meetings**: The Secretary reported the following committees had met since the last meeting of the Board:

| | | |
|---|---|---|
| January | 26 | Blood Banks |
| | 27 | Drug Abuse<br>Liaison with Hospitals |
| January | 28 | Interspecialty<br>Continuing Education |
| | 29 | Medical Aspects of Sports<br>Public Welfare |
| February | 2 | Alcoholism<br>Medicolegal |
| | 3 | Smoking & Health<br>Occupational Health<br>Constitution & Bylaws |
| | 4 | Medical Bureau<br>Communicable Disease |
| | 5 | Health Foundation |
| | 8 | Membership<br>Air Pollution |
| | 9 | Medical Ethics & Prof. Conduct<br>Board of Credentials |
| | 10 | Mental Health |
| | 11 | Program Committee<br>Physician Placement |
| | 12 | Utilization<br>Relative Value |
| | 16 | Grievance |
| | 17 | Liaison with Medical Schools<br>Child Welfare<br>Legislative |
| | 18 | Breast Cancer Study<br>Insurance Committee |
| February | 19 | Community Health Week Subcommittee |
| | 20 | Liaison with Allied Professions |

Special Meetings:

| | | |
|---|---|---|
| February | 2 | Medicaid Program (Dr. Bacon) |
| | 4 | Foundations Subcommittee |
| | 8 | Public Information<br>& Educational Subcommittee |
| | 10 | Breakfast<br>Medicine & Religion Symposium |

**Board of Credentials:** On recommendation of the Board of Credentials, 8 applicants were elected to Active membership and 4 to Associate membership. Their names appear on page 295. Approval was given to the following changes in membership status:

*Transfers*

*Active to Associate:* Earl B. Thompson, Ernest W. Lowe, George Selby, Laszlo K. Csatary, and Nina B. Woodside.
*Associate to Active:* Peter D. Commanduras and Dennis J. Hand.
*Resident-Intern to Active:* John Brown Craft, Jr.
*Active to Special:* Roger O'Donnell, Jr. and W. Palmer Dearing.

*Resignations*

*Active:* Steven Oristian and Murray Grant.
*Associate:* Dale C. Cameron

*Reinstatement*

*Active:* Peter I. Kenmore.

**Mental Health Committee Recommendations:** Following a brief discussion on the recommendations of the Mental Health Committee together with Dr. Gates' recommendations at the dinner portion of the meeting, a motion was made and carried to accept the following recommendation: "the Mental Health Committee recommends to the Executive Board that the wording on the District of Columbia drivers permit application be changed to the singular question: Have you been treated for any nervous or mental disorder within the past four (4) years?"

**Society Position on Abortions:** The Chairman opened discussion on the above subject with a summary of the past actions of the Board and Dr. Robert Nelson's Ad Hoc Committee report, after which he opened the discussion for comments from each of the members of the Board. Viewpoints both pro and con were expressed most cogently by every member of the Board. After thorough and lengthy discussion, the members of the Board agreed with the consensus of the Ad Hoc Committee and the Mental Health Committee. A motion was made and carried to accept the recommendation of the Mental Health Committee, with some modification, as follows: "that when termination of pregnancy is in conformity with the laws of the District of Columbia, the interruption of a pregnancy should be a matter between a licensed doctor of medicine and his patient and that the doctor will be governed by the same prevailing professional standards and ethics of medical practice which governs all medical-surgical procedures. It is understood that appropriate consultation should be obtained when indicated.

**Medical Ethics Committee Recommendation:** A motion was made and carried to accept the recommendation of this committee that the Executive Director of the Medical Society inform all members of the Society of their responsibility to designate alternates to cover their practice when they are unavailable whether or not they are subscribers of the Medical Bureau of the Medical Society.

**Medicine and Religion Committee Recommendation:** After a brief discussion a motion was made and carried that if the original purpose of the Davidson Memorial Lecture funds so specifies, the committee on medicine and religion is hereby given the authority to utilize the money set aside by the fund for either a lecture, informative program, or project to advance the common concerns of medicine and religion, and that this authority be limited to this year only.

**Environmental Health Committee Recommendation:** A motion was made and carried to adopt the following recommendation from this committee: "that a letter of commendation and appreciation for the efforts of Mr. Malcolm Hope as Consultant to the Committee on Environmental Health be drafted and submitted to Dr. Raymond Standard, Director of Department of Human Resources of the District of Columbia."

**Authorization for Mr. Ferraraccio to Sign Checks:** A motion was made and carried to authorize Mr. Ferraraccio, as Secretary-Treasurer of the Medical Society to sign all checks effective March 1, 1971, and to designate those who will have access to the safe deposit box.

**Interspecialty Committee Recommendations:** The Board next took up the memorandum addressed to the President from the Chairman of the Interspecialty Committee. Much discussion prevailed over a number of recommendations which were included in the memorandum. With regard to the Medicaid Program vis-a-vis the Medical Society, Dr. Korengold said that he and Mr. Ferraraccio have had one meeting with Dr. Washington and that subsequent regular meetings will be scheduled to provide a continuing dialogue on problems relating to the Medicaid Program. It was noted by several members of the Board that numerous misunderstandings and misconceptions have persisted with regard to the Medicaid Program. Dr. Hughes related to the Board discussions he has had with Dr. Washington.

Dr. Bacon reported on a meeting he had with the regional and local representatives of the Medicaid Program. He noted that from his conversations with these men that in general there is considerable unhappiness within the Medicaid Program Staff regarding the way it is being run.

In conclusion, it was agreed that Dr. Korengold and Dr. Crain would continue to report to the Board on problems relating to the Medicaid Program.

With respect to the wording on the "Champus and Medicare" forms, a motion was made and carried to recommend to Medical Service of D.C. that the following phrase should be used as a comment "amount paid is the limit of the carrier's responsibility." It was agreed by the Board that Dr. Boland will bring this to the attention of the Medical Advisory Committee of Medical Service. Further, that a letter be written to Mr. Victor Brian of Medical Service on the same subject.

The Board agreed, and Dr. Biben will be so informed, that the Conversion Factor should not be included in the project on revamping Current Terminology for Relative Value Scales.

The Board agreed to notify the membership via the Newsletter about the new U.C.R. Plan being instituted by Medical Service beginning March 1 and of the related Peer Review process.

**Public Welfare Committee Recommendation:** A motion was made and carried to adopt the recommendation of this committee but with the inclusion in the last sentence of the words "appropriate funds from Federal and State sources be provided." Therefore, the recommendation would read, with correction, as follows: "The Public Welfare Committee recommends that the authority for setting up the regulations, supervision and enforcement of foster care homes, nursing homes and personal care homes should be vested in one state agency under the Department of Human Resources. Secondly, the attendants receive additional training in first aid and general upgrading of their standards. Thirdly, the Public Welfare Committee recommends that appropriate funds from Federal and State sources be provided for the purposes stated above."

### Other Business

1. **Relative Value Study Committee Recommendation:** A motion was carried to adopt the recommendations of the Relative Value Study Committee as follows: to accept the recommendation of the section on Internal Medicine and make the following changes in the terminology and assign a unit value to 9905. Also, to assign code numbers and unit values for the technical work related to this procedure:

| | | |
|---|---|---|
| 9905 | Ambulatory Electrocardiographic Tape Recording - Interpretation & Report | 12 |
| 9906 | Ambulatory Electrocardiographic Tape Recording - Procedure Only | 28 |
| 9907 | Ambulatory Electrocardiographic Tape Recording - Repeated Studies | 16 |

2. **News Media Dinner:** A motion was made and carried to approve the dinner meeting for the news media representatives to be held some time in April.

3. **Physicians Assistants:** Dr. Korengold reported that Dr. Duvall, Chairman of the Committee with Allied Professions has appointed a subcommittee to be chaired by Dr. Fuchs to explore the subject of physicians assistants in depth.

4. **Communicable Disease Committee:** A motion was made and carried to adopt the recommendation of this committee as follows: (1) that the Medical Society, through its appropriate committees, actively participate in programs to treat and control the present epidemic of gonorrhea, (2) that the committee be kept informed by the other committees of the Society of matters pertaining to the problem and control of hepatitis and drug abuse, and (3) that the Society, through its appropriate channels of communication, inform the hospitals in the area that this Committee is willing to work with the hospitals in matters of communicable disease control.

5. **Reception for New Members of the Society:** Dr. Korengold reminded the Board of the authorization it passed some time ago and announced that the Membership Committee will hold quarterly receptions for new members of the Society the first one of which will be held on Friday, April 2, 1971.

6. **Winter Membership Meeting:** Dr. Korengold reported that due to the overwhelming response from the members, the meeting to be held on March 10 is being relocated to the Mayflower Hotel. He said that close to 600 members have already indicated their attendance and that plans for the meeting are going along very well.

7. **Foundation Subcommittee:** The Chairman noted, that at the request of Dr. Boland and the Foundation Subcommittee, a separate subcommittee will be formed to deal with the Medical-Dental Foundation thereby making it possible for Dr. Boland's Committee to channel all of its energies into the Foundation for Medical Care. At the same time, Dr. Ecker appointed Dr. Warren Brill to Dr. Boland's Committee, succeeding Dr. Korengold.

8. **New Appointment to the Annals Editorial Board:** A motion was made and carried to approve Dr. Wallace M. Yater's recommendation that Dr. William McFarland be appointed to the Editorial Board to succeed Dr. James Halstead as representative of the Veterans Administration Hospital.

9. **Subcommittee on Annals:** Dr. McCune reported on a recent meeting of his Subcommittee on Annals, at which time it was agreed to publish a summary of the Annals survey in the Newsletter along with an announcement that recruitment for an Associate Editor is underway.

There being no further business the meeting was adjourned at 10:15 p.m.

# GENERAL NEWS

**Dr. Samuel M. Fox III** has been named **President-Elect of the American College of Cardiology**. Professor of Medicine at the George Washington University, Dr. Fox formerly was Chief of the Stroke Control Program, U.S. Public Health Service.

The Cardiologist has had a long and distinguished career in government service, having also been Assistant Director of the National Heart Institute, N.I.H. He has held academic posts in Cairo, Egypt, at the University of Pennsylvania, and at Georgetown University.

**Dr. Leon Yochelson** has assumed duties as Chairman of the Board and **President of the Medical Staff of the Psychiatric Institute in Washington, D.C.**, and Chairman of the Psychiatric Institute Foundation.

Dr. Yochelson, former Chairman of the Department of Psychiatry at the George Washington University Medical Center, has been a member of the faculty at the University for more than 20 years. He continues as Professor of Psychiatry and as Co-Director of the University's Institute of Law, Psychiatry and Criminology. He is a consultant to the National Institute of Mental Health, Children's Hospital of the District of Columbia, and an honorary consultant to Sibley Memorial Hospital. Dr. Yochelson is a past President of the Washington Psychiatric Society and past Chairman of the Committee on Mental Health of the D.C. Medical Society. He is currently a Training and Supervising Analyst of the Washington Psychoanalytic Institute and an Examiner for the National Board of Psychiatry and Neurology.

The infectious Diseases Section of the Department of Medicine at Howard University College of Medicine is offering **fellowships in Infectious Diseases and Tropical Medicine** commencing July 1, 1971. Fellows must be American citizens or possess a permanent visa. The program involves 9 months clinical and research experience at Howard and 3 months clinical and research experience at the University of the West Indies, Faculty of Medicine, Kingston, Jamaica. For details and application forms, please contact M. E. Grigsby, M.D. at the above address, Washington, D. C. 20001.

Hematologists at the George Washington University Medical Center have been selected to participate in a U.S.-French Collaborative venture in scientific and technical studies.

**Dr. Wallace N. Jensen**, Chairman of the Department of Medicine, and **Dr. Lawrence S. Lessin**, Director of the Division of Hematology, will conduct the studies in the **Franco-American scientific exchange.**

Under terms of an agreement signed by both countries, the Institut National de la Santé et de la Recherche Medicale (INSERM) will coordinate French participation while the Fogarty International Center will coordinate the American participation through the National Institutes of Health. The research theme to which Professors Jensen and Lessin have been assigned concerns cellular micro-irradiation, all ultrastructure and function of cells.

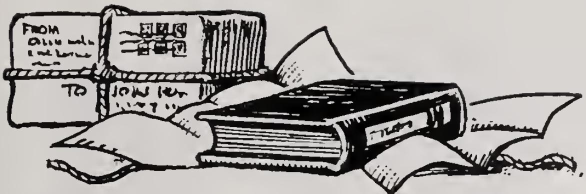
**Larry Nathan**, Chairman of the Independent Federal Savings and Loan Association and Retail Consultant to Phillips Van Heusen Corporation, has accepted Chairmanship of the **American Cancer Society, D.C. Division's 1971 Fund-Raising and Educational Crusade.**

In accepting the Crusade Chairmanship, Mr. Nathan set the 1971 Crusade Goal at $555,000. for the D.C. Division. April has been designated Crusade Month, when 10,000 volunteers now being enrolled will carry the message of research, education and service for early detection and assistance to victims.

**Dr. William B. Walsh**, Founder and President of Project HOPE, received the **1971 Distinguished Service Award** from the American College of Cardiology Saturday, February 6, 1971. The Award was presented in a convocation ceremony of the Twentieth Annual Scientific Session of the College in Washington, D.C.

In making the presentation, College President Dr. William A. Sodeman said that "Dr. Walsh's devotion and dedicated service to international health have provided stimuli for the alleviation of disease and human suffering."

Past recipients of the Award have been Mrs. Albert D. Lasker, Lyndon Baines Johnson, and Lister Hill.



# Books Received

**An Introduction to Neurosurgery.** 2nd edition. BRYAN JENNETT, M.D. Price, $13.50. Pp. 365 with illustrations. St. Louis: Mosby, 1970.

**Ocular Pharmacology.** 2nd edition. WILLIAM H. HAVENER, M.D. Price, $29.50. Pp. 556 with 304 illustrations. St. Louis: Mosby, 1970.

**Ophthalmic Ultrasound.** KURT A. GITTER, M.D. ET AL. Price, $29.50. Pp. 374 with 623 illustrations. St. Louis: Mosby, 1969.

**Selective Bibliography of Orthopaedic Surgery.** 2nd edition. AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS. Price, $7.25. Pp. 114. St. Louis: Mosby, 1970.

**Medical Pharmacology, Principles and Concepts,** 5th edition. ANDRES GOTH, M.D. Price, $16.50. Pp. 665 with 108 illustrations. St. Louis: Mosby, 1970.

**Stereoscopic Atlas of Macular Diseases.** DONALD GASS, M.D. Price, $48.50. Pp. 323 with 498 illustrations, 105 stereoscopic views, View Master Reels and compact viewer. St. Louis: Mosby, 1970.

**Stereoscopic Manual of the Ocular Fundus in Local and Systemic Disease.** FREDERICK BLODI, M.D., LEE ALLEN, and OGDEN FRAZIER. Price, $39.50. Pp. 135 with 119 illustrations. 112 stereoscopic views in full color on 16 View Master reels, and a View Master compact viewer. St. Louis: Mosby, 1970.

**Surgery and Biology of Wound Repair.** ERLE E. PEACOCK, JR., M.D. and WALTON VAN WINKLE, FR., M.D. Price, $21.50. Pp. 630 with 338 illustrations. Philadelphia: Saunders, 1970.

**Synopsis of Anatomy.** LIBERATO J. A. DIDIO, M.D. Price, $17.75. Pp. 530 with 388 illustrations. St. Louis: Mosby, 1970.

**Snyopsis of Dermatology.** WILLIAM STEWARD, M.D., JULIUS DANTO, M.D. and STUART MADDIN, M.D. Price, $13.85. St. Louis: Mosby, 1970.

**Synopsis of Pharmacology,** 2nd edition. V. C. SUTHERLAND, PH.D. Price, $10.75 (paper). Pp. 720, illustrated. Philadelphia: Saunders, 1970.

**Urological Surgery,** 4th edition. AUSTIN I. DODSON, JR., M.D. Price, $32.50. St. Louis: Mosby, 1970.

**Oculoplastic Surgery, A Compendium of Principles and Techniques.** BYRON SMITH, M.D. and THOMAS CHERUBINI, M.D. Price, $18.50. Pp. 157 with 275 drawings in 55 plates. St. Louis: Mosby Co., 1970.

**Ophthalmic Optics and Refraction: System of Ophthalmology,** Vol. V, SIR STEWART DUKE-ELDER, G.C.V.O., F.R.S., and DAVID ABRAHMS, D.M., F.R.C.S. Price, $44.50. Pp. 879 with 882 illustrations and 9 colored plates. St. Louis: Mosby, 1970.

**Becker-Shaffer's Diagnosis and Therapy of the Glaucomas.** 3rd edition. ALLAN KOLKER, M.D. and JOHN HETHERINGTON, JR., M.D. Price $25.00. Pp. 495 with 383 illustrations and 6 color plates. St. Louis: Mosby, 1970.

**The Early Orthopaedic Surgeons of America.** ALFRED RIVES SHANDS, JR., M.D. Price, $15.00. Pp. 190 with 156 illustrations. St. Louis: Mosby, 1970.

**Essentials of Clinical Endocrinology.** NORMAN G. SCHNEEBERT, M.D. Price, $22.50. Pp. 449 with 210 illustrations. St. Louis: Mosby, 1970.

**The Face in Genetic Disorders.** RICHARD M. GOODMAN, M.D. and ROBERT J. GORLIN, D.D.S. Price, $19.00. Pp. 169, with 276 illustrations. St. Louis: Mosby, 1970.

**NURSES REGISTRY**

LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**

# NATIONAL & REGIONAL MEETINGS

April 19–22: Southeastern Surgical Congress. Miami Beach, Florida. Address: Dr. A. H. Letton, Secretary-Director, 340 Boulevard N.E., Atlanta, Georgia 30312.

April 25: A.M.A. Conference on Long-Term Care (Management of the Patient in Long-Term Facility). Chicago. Address: A.M.A. Department of Health Care Organization, 535 N. Dearborn Street, Chicago 60610.

April 26–27: A.M.A. Congress on Environmental Health–Solid Waste Management. New York City. Address: A.M.A. Department of Environmental Health, 535 N. Dearborn Street, Chicago 60610.

**April 29–May 3: American Psychoanalytic Association, Annual Meeting. Washington, D.C., Shoreham Hotel. Address: Mrs. Helen Fischer, Executive-Secretary, 1 East 57th Street, New York 10022.**

**April 30–May 2: American Academy of Psychoanalysis. Washington, D. C., Mayflower Hotel. Address: Miss Jean Baker Miller, 510 East 86th Street, New York, 10028.**

**May 1: American College of Psychiatrists. Washington, D. C., Shoreham Hotel. Address: Dr. Peter A. Martin, Secretary-General, 857 Fisher Building, Detroit, Michigan 48202.**

May 3–7: American College of Obstetricians and Gynecologists. San Francisco. Address: Dr. Michael Newton, Director, 79 West Monroe Street, Chicago 60603.

May 16–19: American Thoracis Society. Los Angeles. Address: Mr. Robert G. Weymueller, Executive-Secretary, 1740 Broadway, New York 10019.

May 16–20: American Dermatological Association. Sky Top, Pennsylvania. Address: Dr. Barrett Kennedy, Secretary, Louisiana State University School, 1542 Tulane, New Orleans 70112.

**May 23–27: American Association of Plastic Surgeons. Williamsburg Inn, Williamsburg, Virginia. Address: Mr. Dallas F. Whaley, Executive-Director, 29 East Madison Street, Chicago 60602.**

June 20–24: American Medical Association. Atlantic City. Address: Dr. Ernest B. Howard, Vice-President, 535 North Dearborn Street, Chicago 60610.

Hypercatabolic Patient with Acute Renal Failure–Thompson et al

*(Continued from page 242)*

3. MUEHRCKE, R. C.: Acute Renal Failure: Diagnosis and Management. St. Louis: Mosby Co., 1969.
4. SWAN, R. C., AND MERRILL, J. P.: Medicine, 1953, 32, 215.
5. HAMBURGER, J. ET AL: Nephrology. Philadelphia: Saunders Co., 1968.
6. SMITH, L. H. ET AL: Amer. J. Med., 1955, 18, 187.
7. TESCHAN, P. E. ET AL: Amer. J. Med., 1955, 18, 172.
8. MASSUMI, R. A., ANDRADE, A., AND KRAMER, N.: Amer. J. Med., 1969, 46, 635.
9. TESCHAN, P. E., O'BRIEN, T. F., AND BAXTER, C. R.: Clinical Research, 1959, 7, 280.
10. BREST, A. N., AND MOYER, J. H.: Renal Failure. Philadelphia: J. B. Lippincott Co., 1967, p. 281.
11. EASTERLING, R. E., AND FORLAND, M.: Trans. Amer. Soc. Artif. Intern. Organs., 1964, 10, 200.
12. SALISBURY, P. F.: Arch. Intern. Med., 1958, 101, 690.
13. QUINTON, W., DILLARD, D., AND SCRIBNER, B. H.: Trans. Amer. Soc. Intern Organs., 1960, 6, 104.
14. MAHER, J. F. ET AL: New Eng. J. Med., 1963, 268, 451.
15. BASLOV, J. T., AND JORGENSEN, H. E.: Amer. J. Med., 1963, 34, 753.
16. HAMPERS, C. L., SOELDNER, J. S., DOAK, P. B., AND MERRILL, J. P.: J. Clin. Invest., 1966, 45: 11, 1719.
17. BRIGGS, J. D., BUCHANAN, K. D., LUKE, R. G., AND MCKIDDIE, M. T.: Lancet, 1967, 462, 1.
18. MARCUS, A. J.: New Eng. J. Med., Platelet Function, June 5, 1969.
19. MERRILL, J. P. Ann. Rev. Med., 1960, 11, 127.
20. STRAUSS, M. B., AND WELT, L. G., EDITORS: Diseases of the Kidney: Acute Renal Failure, J. P. MERRILL. Boston: Little, Brown, & Co., 1963.

Teaching of Anatomic Pathology with Color Fiche–Smith

*(Continued from page 251)*

instrument; it is to transmit to the student a grasp of various lesions in a combined morphologic and clinical context. It is the pathologist who needs the microscope most, but for the student the method that transmits the required information in the most effective way is presumably the method of choice.

### Reference

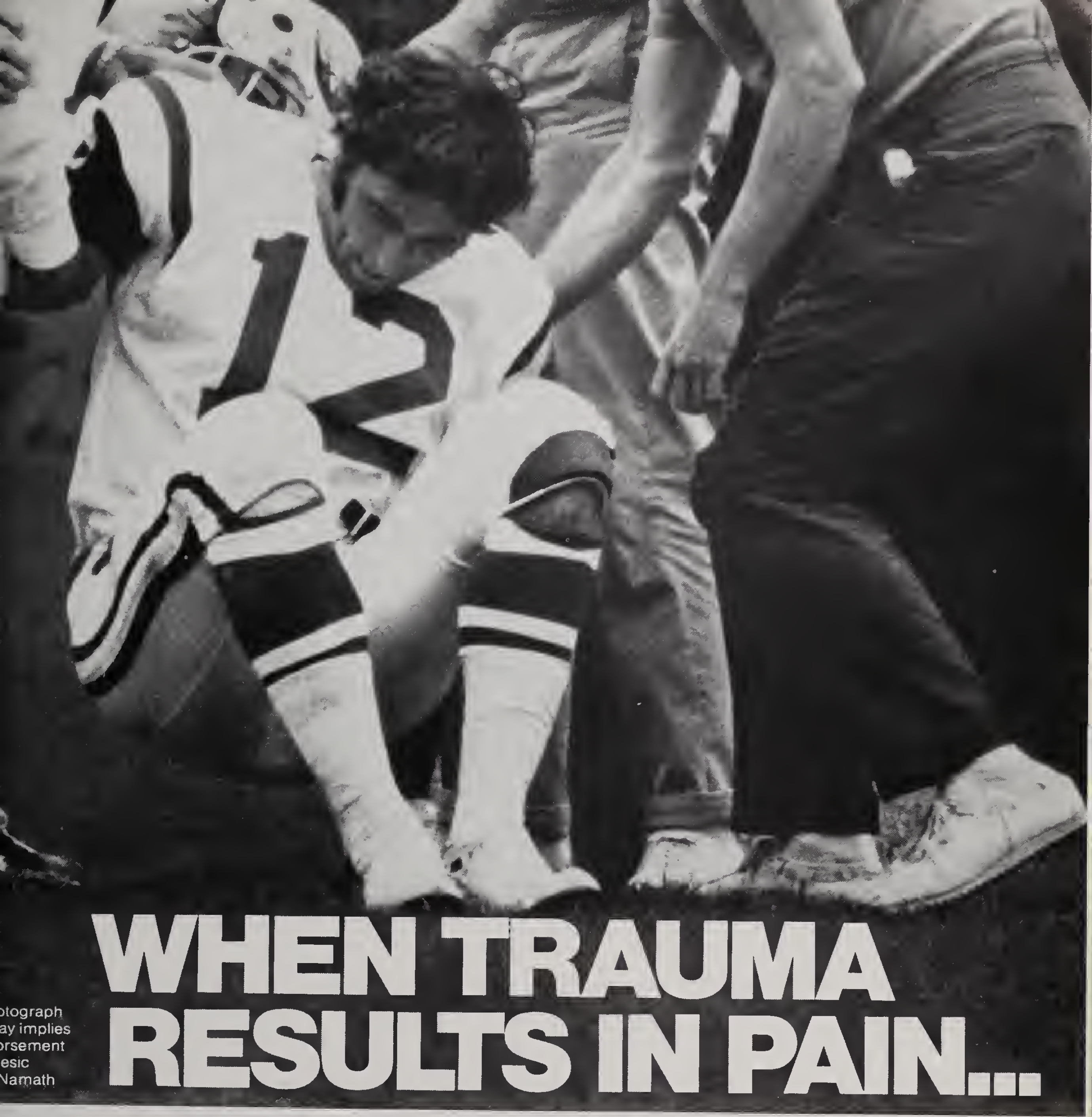
1. THOMAS, A. J. Business Systems Markets Division, Eastman Kodak Company, Rochester, New York 14650.

*Long recording experience and low rates*

Audiorich

*Recording studio and on-location recording*

**24-HOUR PHONE: 585-5092**



gesic . . . provides effective analgesia and relief of associated muscle spasm

**Contraindications:** Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.
Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).
**Warnings:** USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.
USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.
**Precautions:** It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.
**Adverse Reactions:** Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established. **Dosage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

**Riker Laboratories, Inc.**
NORTHRIDGE, CALIFORNIA 91324
A SUBSIDIARY OF 3M COMPANY

**NORGESIC®**
(orphenadrine citrate, 25 mg., aspirin, 225 mg., phenacetin, 160 mg., caffeine, 30 mg.)

**the versatile analgesic**

2
3
4
5
6

# he night shift
# of depression...
# insomnia

pression is a 24-hour-a-day problem. And insomnia is
en its nocturnal expression. In fact, insomnia may be a
symptom in establishing the diagnosis of depression.

AVIL HCl (Amitriptyline HCl, MSD) may prove quite
pful when you have arrived at such a diagnosis. Unlike
chic energizers or agents that merely elevate mood,
AVIL HCl embodies a mild antianxiety action which
nifests itself even before the fundamental antidepressant
ivity of the drug becomes evident. Daytime drowsiness
urs in some patients, usually within the first few
s of therapy.

TE: Not recommended during the acute recovery phase
owing myocardial infarction. Patients with cardiovascular
orders should be watched closely; arrhythmias, sinus
hycardia, and prolongation of the conduction time have
n reported, particularly with high doses; myocardial
rction and stroke have been reported with drugs of this
s. Close supervision is required for hyperthyroid
ents or those receiving thyroid medication. Concurrent
troshock therapy may increase the hazards of therapy;
n treatment should be limited to patients for whom it is
ntial. Discontinue the drug several days before elective
ery if possible.

---

**aindications:** Known hypersensitivity. Should not be given
mitantly with or within at least 14 days following the discontinuance
onoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl
usly with gradual increase in dosage until optimum response is
ed. Not recommended during the acute recovery phase following
rdial infarction or for patients under 12 years of age.
**ngs:** May block the antihypertensive action of guanethidine or similarly
compounds. Should be used with caution in patients with a history of
es or urinary retention, or with narrow-angle glaucoma or increased
cular pressure. Patients with cardiovascular disorders should be
ed closely; arrhythmias, sinus tachycardia, and prolongation of the
ction time have been reported, particularly with high doses;
rdial infarction and stroke have been reported with drugs of this
Close supervision is required for hyperthyroid patients or those
ing thyroid medication. May impair mental and/or physical abilities
ed for performance of hazardous tasks, such as operating machinery
ing a motor vehicle. Safe use during pregnancy and lactation has not
stablished; in pregnant patients, nursing mothers, or women who may
e pregnant, weigh possible benefits against possible hazards to
r and child.
**tions:** When used to treat the depressive component of schizophrenia,
tic symptoms may be aggravated; in manic-depressive psychosis,
sed patients may experience a shift toward the manic phase, and
id delusions, with or without associated hostility, may be
rated; in any of these circumstances, it may be advisable to reduce
se of amitriptyline HCl, or to use a major tranquilizing drug, such as
nazine, concurrently.

When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.
**Adverse Reactions:** *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.
*Cardiovascular:* Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. *Anticholinergic:* Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. *Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. *Other:* Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. *Withdrawal Symptoms:* Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.
**How Supplied:** Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.
*For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486*

**when the diagnosis is depression**

**ELAVIL® HCl**
**(AMITRIPTYLINE HCl | MSD)**

MSD MERCK SHARP & DOHME

# OBITUARIES

## Creed F. McFall, M.D.
## 1924–1970

Dr. Creed F. McFall, Jr. died November 22, 1970 in New York City. He lived at 320 Ft. Duquesne Boulevard, Pittsburgh, Pennsylvania.

Dr. McFall was born in West Hazelton, Pennsylvania. He received his medical degree in 1948 from George Washington University. He interned at Queen of Angels Hospital in Los Angeles, California from 1948–1949. He served residencies at Queen of Angels Hospital, 1950–1951, the George Washington University Hospital, 1953–1954, and at Bellevue Hospital, New York City from 1954–1955.

He served in the U.S. Air Force Medical Corps. from 1951–1953 in Fairbanks, Alaska.

In addition to membership in the Medical Society of the District of Columbia, Dr. McFall held memberships in California, New York and Maryland medical societies, as well as the Royal Society of Medicine, London, England, and the American Medical Association. He was a Diplomate, Pan American Medical Association, International Medicine. Dr. McFall was a Fellow of the American Geriatrics Society, the American Academy of Compensation Medicine, and the New York Diabetes Association.

## James R. Costello, M.D.
## 1910–1971

Dr. James R. Costello, professor of obstetrics and gynecology at Georgetown University School of Medicine died February 24, 1971. He lived at 6607 16th Street, N.W.

A native of Washington, D.C., Dr. Costello received his medical degree from Georgetown in 1925. He interned at Georgetown University Hospital from 1925–1926, and served his residency at the Columbia Hospital for Women the following year. In 1933 he did postgraduate work at the University of Frankfurt am/Main in Frankfurt, Germany.

Dr. Costello was a founding Fellow of the American College of Obstetrics and Gynecology, a past president of the Washington Gynecologic Society, and chief of staff, obstetrics and gynecology of the Columbia Hospital for Women.

He is survived by his wife, the former Margaret Kramm of the home address; a daughter, Margaret Mary Costello; a son, James R., Jr., of Atlanta and a grandson.

## Elmer R. Shepherd
## 1895–1971

Dr. Elmer Roberts Shepherd, a retired Washington physician died February 16, 1971. He resided at 2022 Columbia Road, N.W.

A native of Danville, Virginia, Dr. Shepherd received his B.S. in 1920 and his M.D. in 1921 from Georgetown University. He served his internship from 1921 to 1922 at Providence Hospital. From 1922 to 1923 he served his residency at Garfield Hospital. Dr. Shepherd held staff appointments at Georgetown University, Episcopal, and Providence Hospitals.

Dr. Shepherd pursued postgraduate studies at the Manhattan Eye and Ear Hospital from 1923 to 1924, the Roosevelt Hospital in 1925 and in Vienna, Austria in 1927.

He was a professor of Otolaryngology, School of Nursing Education, at Catholic University and an associate professor of Otolaryngology at Georgetown Medical School.

Dr. Shepherd was a member of the American Academy of Otolaryngology, the American Medical Association, past president of the Georgetown Clinical Society, as well as a Life member in the Medical Society of the District of Columbia.

He is survived by his wife Ann of the home address.

CAPITAL NURSE
REGISTRY
(Est. 1910)
Licensed
Practical
Nurses and
Practical
Nurses
Recommended
by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding
Registries, serving physicians
and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

*24 Hour Telephone Service*

RAndolph 3-2600 or 3-1771

**Complete professional liability (Malpractice)* and Personal Insurance for the Doctor.**

Employees Workmen's Compensation
Bonds on Employees
Equipment Floater
Fire Insurance Contents
Business Expense Disability
Non-Cancellable Disability Income
Auto and Home Insurance

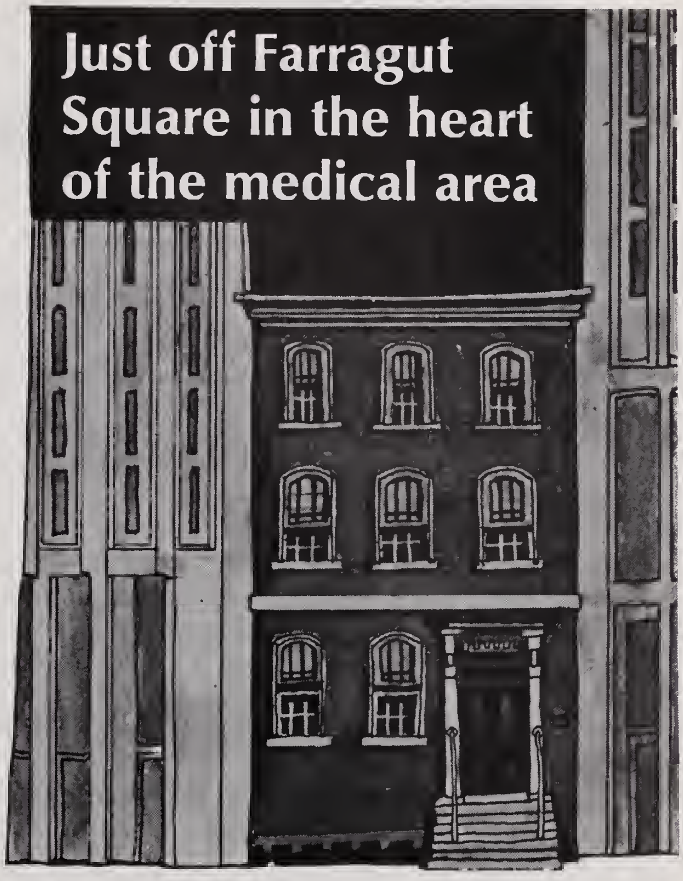
*As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*


Just off Farragut Square in the heart of the medical area

Ec-
on-
omy!

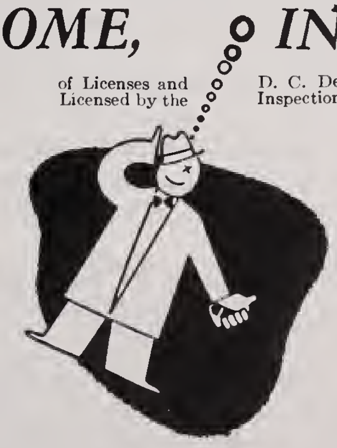
**Dicarbosil®**
ANTACID

Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

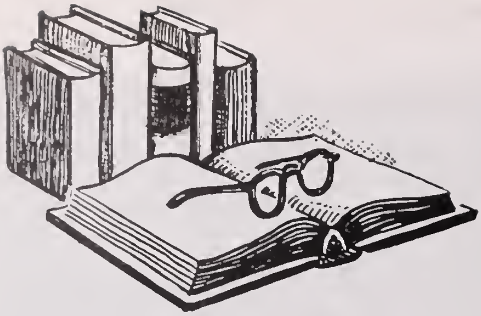
*KALORAMA CONVALESCENT HOME, INC.*

of Licenses and
Licensed by the
D. C. Department
Inspections



INSTITUTIONAL CARE
for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
**at 20th Street, N.W. Adams 2-0063**



# Book Reviews

**Clinical Approach to Endocrine Problems in Children.** MATTHEW STEINER, M.D. Price, $29.50. Pp. 406. St. Louis: Mosby, 1970.

This book represents an admirable attempt to help the pediatrician arrive at a tenable diagnosis when dealing with symptoms associated with endocrine pathology. The 6 chapters are sensibly concerned with presenting complaints: overweight, underweight, tallness, shortness, precocious sexual development and retarded sexual development. This format provides the reader with an approach that stresses the non-endocrine causes of "endocrine" symptomatology. This volume should be regarded as an aid in identifying the etiology of the problem; it does not attempt to be complete enough to deal with all the nuances of diagnostic procedures or complete therapy, although its text touches upon both aspects quite succinctly.

Certain deficiencies are present in this otherwise excellent book. In an appendix containing some detailed diagnostic procedures, the water deprivation test as outlined is done after an overnight fast—something that can be dangerous in a young child with diabetes insipidus. The 6 hour water deprivation outlined by Frasier would serve better. The need for a small dose of dexamethasone before giving ACTH in someone with Addison's disease in order to prevent a possibly serious reaction was not mentioned by the author. The dose schedule given for the treatment of congenital hypothyroidism is too low. Although one would start with 15 mg of desiccated thyroid, the maintenance dose should be guided by the resultant serum thyroxine levels and is generally not less than 45 mg in any child under 1 year of age.

Although premature thelarche and premature pubarche are very common pediatric problems, they are hardly mentioned in the text.

The problem with eponyms is apparent in the index. Under polyostotic fibrous dyplasia we are referred to Albright's syndrome on pp 264-266, but there is a separate entry for McCune-Albright syndrome on pp 113-115. All three names, of course, refer to the same disease.

In general this is a very useful book for the pediatrician or family practitioner, although the price seems a bit steep.

GILBERT P. AUGUST, M.D.

**Corneal Contact Lenses**, second edition. Louis J. Girard, editor. Price $23.00 Pp. 348, St. Louis: Mosby, 1970.

This is the second edition of the original book by the Baylor University contact lens group. Changes include the addition of a short chapter on the manufacture of poly (methyl-methacrylate), minor alterations in the section on corneal physiology, a chapter on flush-fitting scleral lenses and other minor modifications.

There is a good discussion of the corneal apical zone as mapped by the topogometer. While most contact lens fitters do not consider the use of such an instrument necessary, it is a valuable research tool. There are very good sections on fitting technique, follow-up routines, symptomatology, and correction of fitting problems, etc.

Perhaps the major disappointment with this book is the lack of any mention of the new soft contact lens, i.e., the hydrophilic gel and silicone lenses. Certainly their clinical use is now well-established and in a book with the inclusive title of *Corneal Contact Lenses*, a discussion of them would be expected.

In summary, however, this is a good general text on hard contact lenses, suitable for beginning fitters and residents. It is a standard text in the field.

MICHAEL A. LEMP, M.D.

**Oculoplastic Surgery: A Compendium of Principles and Techniques.** BYRON SMITH, M.D. and THOMAS CHERUBINI, M.D. Price $18.50. Pp 157, with 275 drawings and 3 photographs. St. Louis: Mosby. 1970.

This is not a surgical text. It is, as the title states, a compendium of principles and techniques. The words are so few that many of the pages are less than half filled. In general the words are well chosen. Each of the 275 drawings by Shirley Baty is worth another thousand words. She does take a bit of artistic license in one of the skin flap drawings and in the Z-plasty drawings, but that does not detract from their superb clarity.

In one case the authors absolutely condemn other techniques which have given excellent results when used by other reputable ophthalmic plastic surgeons; but in general they imply no criticism of the many techniques which are not included in this brief atlas.

They state simply that these are good basic techniques commonly used successfully by them.

With two exceptions, they acknowledge no developers and cite no references. They dispose of that problem in the preface by stating their belief that, "–time, usage, and voluminous literature have adequately established priorities."

With the exception of the section on ptosis there is almost no mention of diagnostic workup.

The pithy text and lucid drawings are pleasant to read. It will be welcome in any residents' library as a supplementary atlas. It is by no means a substitute for the more verbose texts.

ROBERT P. KLING, M.D.

## MEETINGS

Dr. Edward C. Whitmont of New York City, one of the foremost Jungian analytical psychologists in the nation will lead an all-day workshop for practicing therapists and counselors in the Washington Metropolitan area on Saturday, April 17, at Philanthropon House, 2948 Brandywine Street, N. W. He will also give a public lecture at 8:00 p.m. Friday, April 16 in the auditorium of the Medical Society of the District of Columbia. For additional information call Philanthropon House, 363-9220.

The 173rd Annual Meeting of the Medical and Chirurigical Faculty of Maryland is scheduled for May 12, 13 and 14 at the Baltimore Civic Center. There is no registration fee, and credit will be given by the Academy of General Practice for attendance. For additional information write the Medical and Chirurgical Faculty of the State of Maryland, 1211 Cathedral Street, Baltimore, Maryland, or telephone (301) 539-0872.

Surgical Supplies and Equipment

*Complete Fitting Service for*
*Ladies and Men*

**KLOMAN SURGICAL SUPPLY CO.**
**1028 19th Street, N.W.**
**Washington, D. C. 20036**

***Telephone:* 223-3444**

## NEW MEMBERS

### Active

WALTER FRANCIS ABENDSCHEIN, M.D. Office: 3800 Resevoir Road, N. W. Born in Washington, D. C. Medical degree: Georgetown University School of Medicine, 1963. Specialty: Orthopaedic Surgery.

FRANK CHARLES BLACKBURN, M.D. Office: Washington Clinic, 5401 Western Avenue. Born in Jersey City, New Jersey. Medical degree: New Jersey College of Medicine, 1962. Specialty: Internal Medicine.

AHMAD ESFANDIARY, M.D. Office: Hadley Memorial Hospital. Born in Teheran, Iran. Medical degree: Teheran University, 1962. Specialty: Internal Medicine.

FEDERICK B. HENDRICKS, M.D. Office: 2121 Pennsylvania Avenue, N. W. Born in Indiana. Medical degree: Johns Hopkins University, 1962. Specialty: Urology.

WILLIAM S. HUDSON, M.D. Office: 509 Rhode Island Avenue. Born in Kansas. Medical degree: Howard University, 1935. Specialty: General Practice.

MELVYN L. LURIE, M.D. Office: National Institutes of Health, Bethesda, Maryland. Born in Baltimore, Maryland. Medical degree: Harvard Medical School, 1964. Specialty: General Practice.

MAUREEN O'CONNOR, M.D. Office: Cafritz Hospital. Born in England. Medical degree: University of Missouri. 1966. Specialty: Anesthesiology.

WILLIAM STRATHMANN, M.D. Office: 2141 K Street, N. W. Born in California. Medical degree: Harvard Medical School, 1964. Specialty: Psychiatry.

### Associate

IRWIN S. ANDERSON, M.D. Office: D. C. General Hospital. Born in Kingston, West Indies. Medical degree: Howard University, 1966. Specialty: Internal Medicine.

HEREWARD S. CATTELL, M.D. Office: 8212 Wisconsin Avenue. Born in Maryland, California. Medical degree: University of Rochester, 1958. Specialty: Orthopaedic Surgery.

ZAFAR HUSAIN, M.D. Office: Anacostia Neighborhood Health Center, 1328 W Street, S. E. Born in Hyderabad, India. Medical degree: Gandhi Medical College, 1962. Specialty: Pediatrics.

PRIMO ROXAS, M.D. Office: 12420 Surrey Cr. Drive, Tantallon, Maryland. Born in the Philippines. Medical degree: University of Santo Tomas, 1949. Specialty: Anesthesiology.

# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

*Classified advertisements of a professional nature are free to members.*

## REAL ESTATE

FOR SALE: Ideal professional residence, North Portal Estates, upper 16th Street, N.W. Large, custom-built A/C rambler, 4 bedrooms, living room, din. room, den, 4 baths, finished rec. rm., bar, maid's room, screened porch, large patio & modern kitchen. 8-room professional offices: separate entrance incl. reception room, laboratory, consulting room, 4 treatment rooms, X-ray room, powder room. Many extras throughout including extensive panelling & insulation, cabinets, storage facilities. MUST BE SEEN. Contact Mr. Miller, James L. Dixon Realty, (202) Fe 8-7200.

## OFFICE SPACE AVAILABLE

FOR RENT: Several suites available in varying sizes. Convenient to downtown Washington, in immediate vicinity of N.I.H., proximity to Walter Reed Army Hospital, and its annex. Inside and outside parking. Excellent restaurant and general eating facilities. Contact Albert Rathner, Bethesda Bradley Building, 6900 Wisconsin Avenue, Chevy Chase, Maryland 20015. Telephone (301) 656-9460.

## TAX SERVICE

INCOME TAX SERVICE; Will you pay only what is required by law? May I assist you in maximizing your tax benefits? I have a MBA degree and five years experience in performing tax services for my clients. Please call Dean A. Peterson, (202) 836-4031.

## PHYSICIANS WANTED

PHYSICIANS, full or part time employment for Metropolitan Washington area physicians with Washington Regional Red Cross Blood Center. Excellent opportunity to supplement retirement income. Must have D.C., Maryland, Virginia, or West Virginia license or a State license with which reciprocity can be established. For further information call or write Evan C. Stone, Jr., M.D., 2025 E Street, N.W., Washington, D.C. 20006. Telephone (202) 857-3784. E.O.E.

HOUSE OFFICERS WANTED: Medicine and Ob/Gyn. 350 bed community hospital in Suburban D.C. E.C.F.M.G. and Permanent or Immigrant Visa required. Inquire: Medical Staff Office, Holy Cross Hospital of Silver Spring, 1500 Forest Glen Road, Silver Spring, Maryland, 20910.

"Cappy"

INTRODUCES THE WASHINGTON AREA SPECIALISTS *in collections for Professionals*

I'M "Cappy" an Old Fashioned girl with MODERN ideas about bill collecting . . .

*Unless We Collect, There Is No Charge*

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.

THE BALANCED RETIREMENT PLAN

A KEOGH ACT PROGRAM with a wide range of both guaranteed and equity investments. Pension and profit-sharing plans for professional corporations also available on a group basis.

Co-sponsored by the Medical Society of the District of Columbia

For information call or write--

Suter Associates Retirement Planning Company

2545 Wilson Blvd. Arlington, Virginia 22201

*Telephone:* 525–6700

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs
One tablet q.i.d.
Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma

A
BUILDING BLOCK
TO RECOVERY

**One tablet q.i.d.**

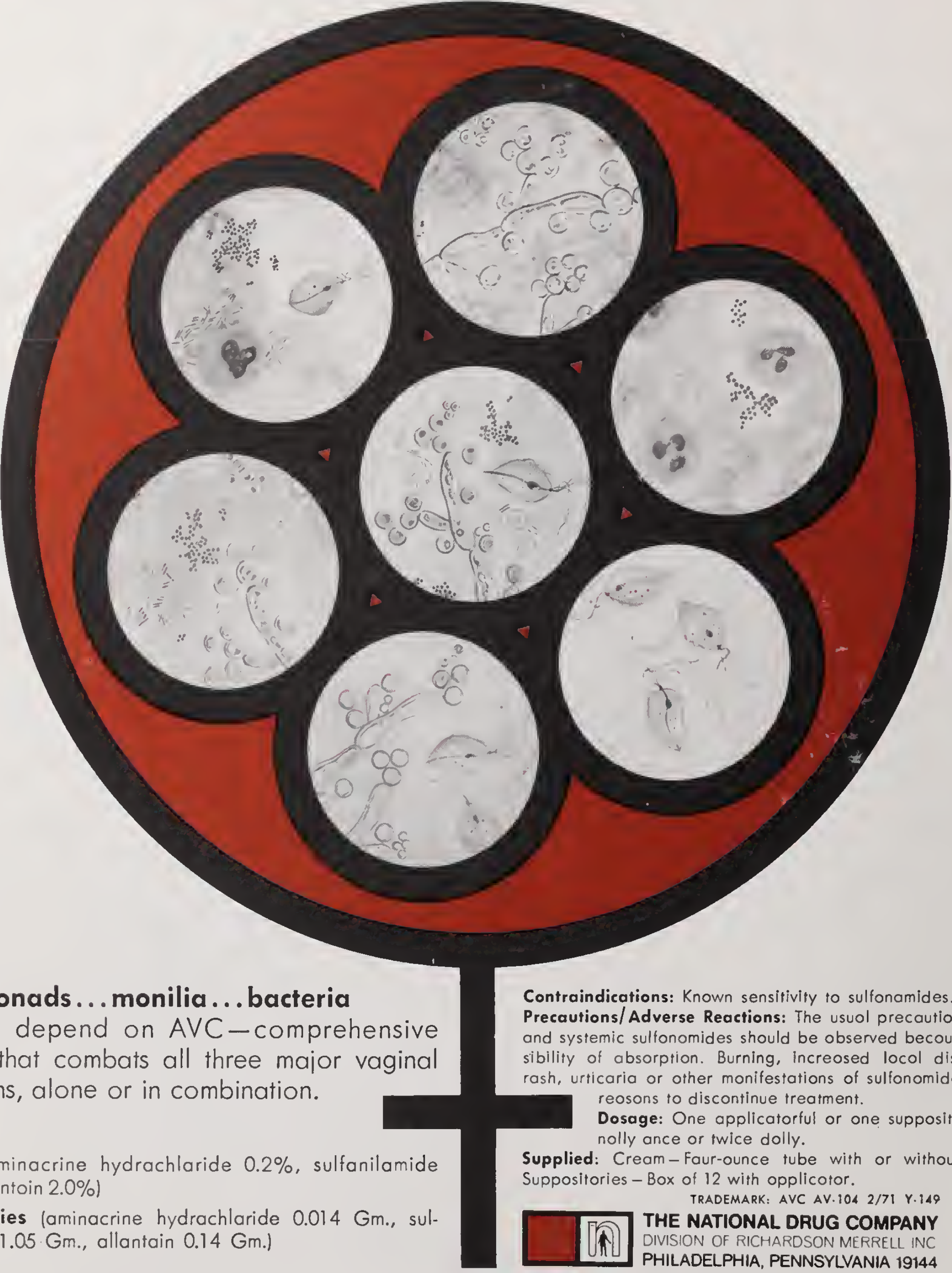
**Indications:** When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
**Contraindications:** ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
**Precautions:** It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
**Adverse Reactions:** Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of enaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
**Dosage:** One tablet q.i.d.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**
TRADEMARK: BITABS U.S. PATENT NO. 3,004,893 9/70 0-009A 161

# Orenzyme® Bitabs

psin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

# The causes of vaginitis are multiple



**Trichomonads . . . monilia . . . bacteria**
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

**AVC**

**Cream** (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

**Suppositories** (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

**Contraindications:** Known sensitivity to sulfonamides.
**Precautions/Adverse Reactions:** The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
**Dosage:** One applicatorful or one suppository intravaginally once or twice daily.
**Supplied:** Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

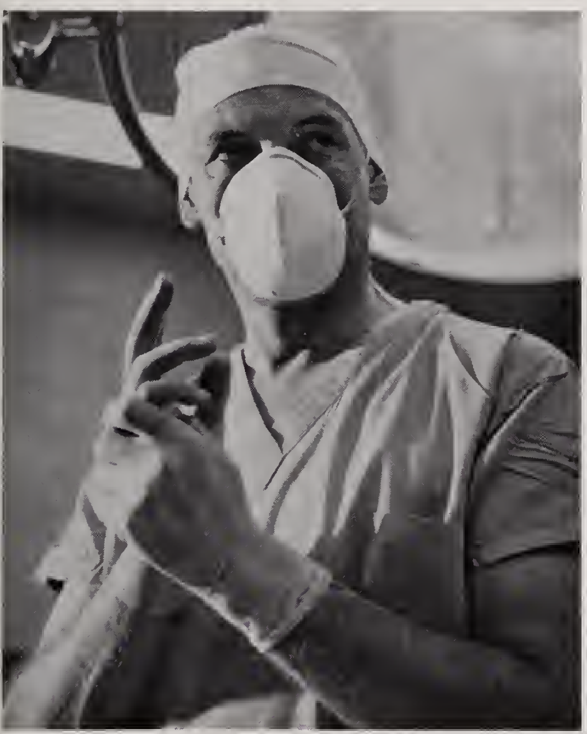
TRADEMARK: AVC AV-104 2/71 Y-149

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

# AVC
# The treatment is singular

# Make Sure You Have Cash To Live On When You're Disabled!

Even doctors get sick and hurt! When your turn comes and you can't continue your practice, will you still be able to provide for yourself and your family—pay for food, clothing, your home, the everyday living expenses, plus extra medical bills?



You can have this financial security with the Disability Income Protection Plan available to members of the Medical Society of the District of Columbia.

PAYS UP TO $225.00 A WEEK
when you're sick or hurt
and can't practice!

*Check these other important features of this plan:*

- Benefits are TAX-FREE, for you to use as you see fit.
- Confinement is never required during disability.
- Benefits are payable regardless of other coverage.
- There is no automatic age termination.
- Your policy is guaranteed renewable while the program remains in force regardless of benefits paid to you or any future changes in health.
- Premiums are low, due to the mass purchasing power of your Society.
- There are few exceptions. Your policy does not cover: suicide or attempted suicide; loss during a declared or undeclared war or while a member of an armed service; loss due to noncommercial flying; costs of childbirth, pregnancy or any complication.

Fill out the coupon below and mail it today! You'll receive complete information on this outstanding Disability Income Protection Plan available to you as a member of the Medical Society of the District of Columbia. Don't delay!

JOSEPH E. JONES, Administrator
1666 Connecticut Avenue, N.W.
Washington, D.C. 20009 Phone: (202) 483-3100

Please rush to me complete information on the Disability Income Protection Plan available to me as a member of the Medical Society of the District of Columbia!

Name______________________________

Address____________________________

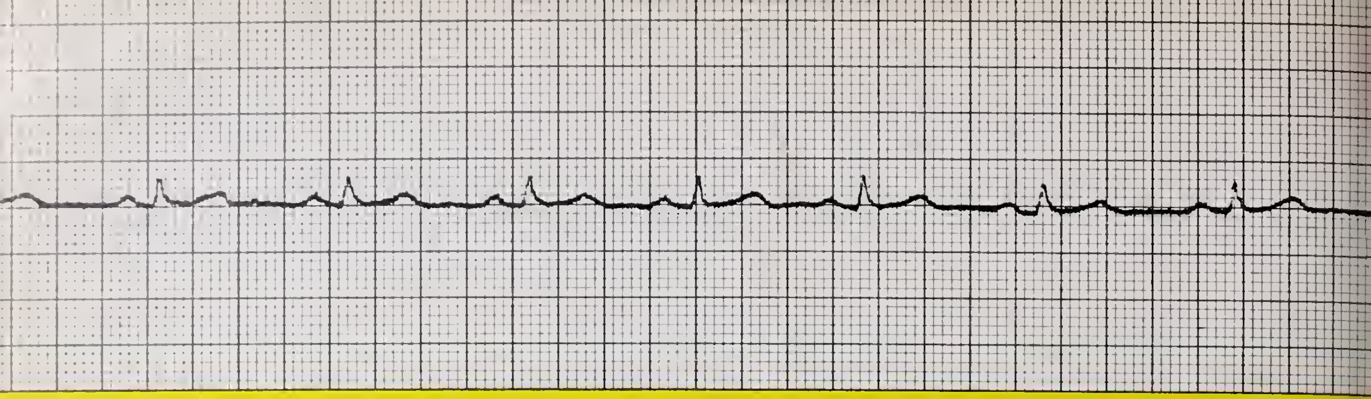
City__________State________ZIP Code_____

Underwritten by

**Mutual of Omaha®**
*The Company that pays*

Life Insurance Affiliate: United of Omaha

MUTUAL OF OMAHA INSURANCE COMPANY
HOME OFFICE: OMAHA, NEBRASKA



# When disease is ruled out and psychic tension is implicated

# Valium® (diazepam)

# helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
**Roche**
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

*Volume 40 · Number 5 · May 1971*

# Medical Annals

of the Distri

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
4 JUN 1971

Lib.
25 Shattuck St.
Boston, Mass. 02115

**Peritoneoscopy**
Nelson P. Trujillo, M.D.

**Anticholinergic Drugs**
Gladys Rosenstein, M.D., Herman Rosenstein, M.D.,
Devaughn E. Belton, M.D., and Frances Dacosta, M.S.

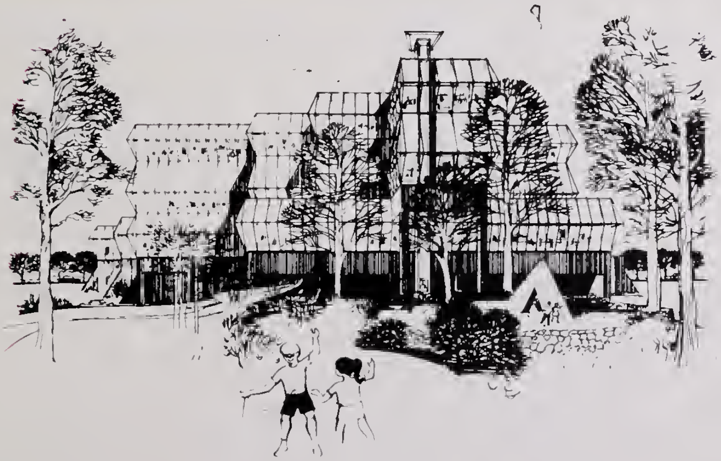
**Rehabilitation of Indigent Arthritis Patients**
Geoffrey Booth, Gerald Goldklang
and Henry Roth, M.D.

**Guidelines for Infant Feeding**
Karakart S. Gokulanathan, M.D., F.R.C.P., F.A.A.P. and
Kannarkat P. Verghese, M.D.

**Progressive Systemic Sclerosis**
M. Arthur Charles, CPT, MC

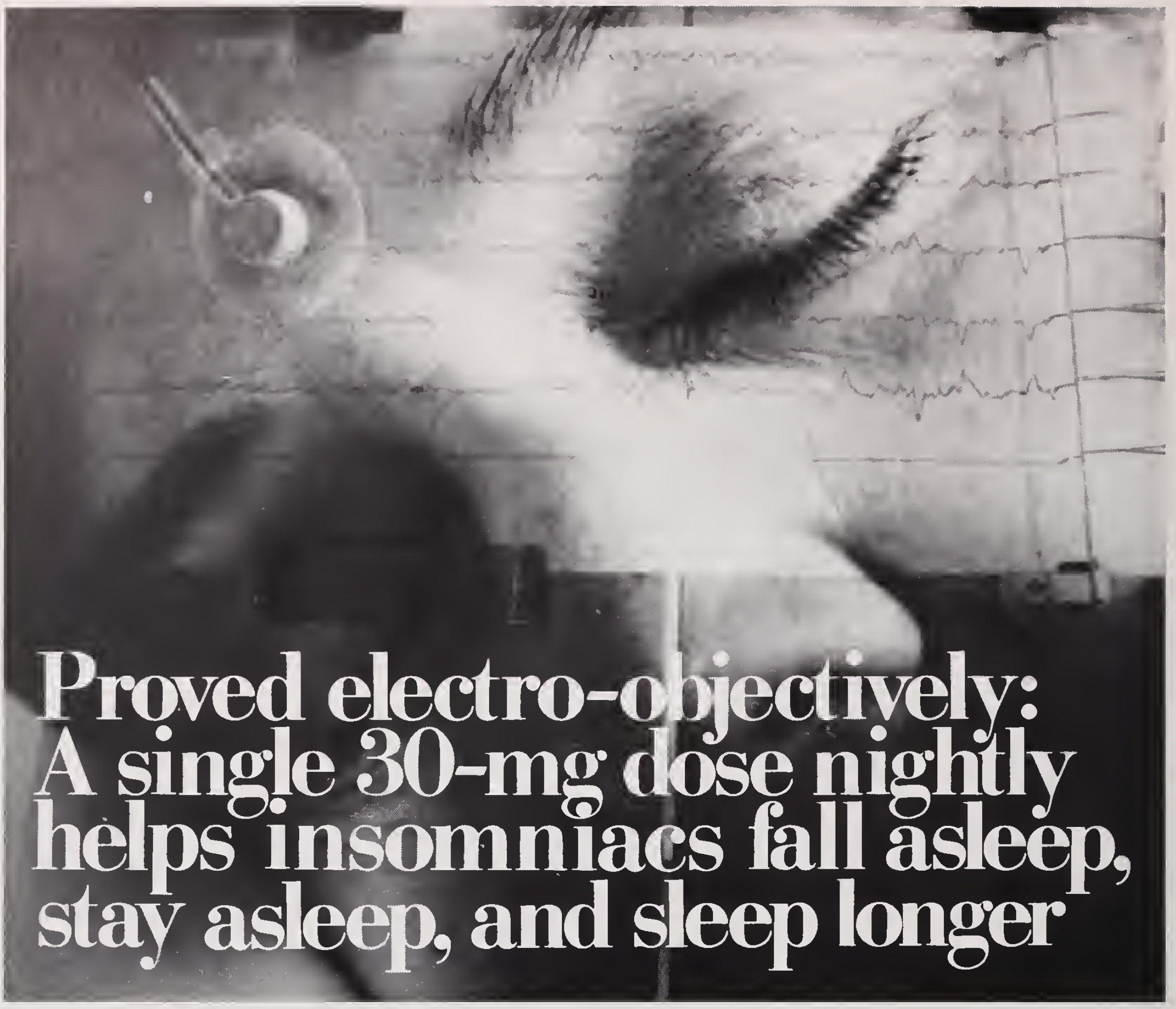
**Pre-eclampsia with Bell's Palsy and Fetal Anomalies**
Aaron H. Gerber, M.D., F.A.C.O.G., F.A.C.S.
Monica J. Collins, M.D., F.R.C.P.

**Jaundice and Abdominal Pain in a 65-Year-Old Woman—CPC**
Chandler Smith, M.D.



Architects drawing of the new Children's Hospital National Medical Center scheduled for completion in 1973

*Annual Scientific Assembly*
THE STATLER HILTON HOTEL
September 23 & 24, 1971



# Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

**Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]**

**Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.**

## Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

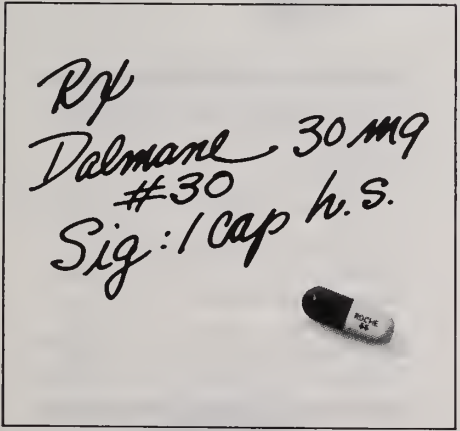
Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

## Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.[3] Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

**References: 1.** Kales, A., *et al.:* "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. **2.** Kales, A., *et al.:* "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed.): *Sleep: Physiology and Pathology*, Phila., Lippincott, 1969, p. 331. **3.** Data on file, Medical Department, Hoffmann-La Roche Inc.



For the sleep your patients need

New **Dalmane**®
(flurazepam hydrochloride)

**Before prescribing, please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

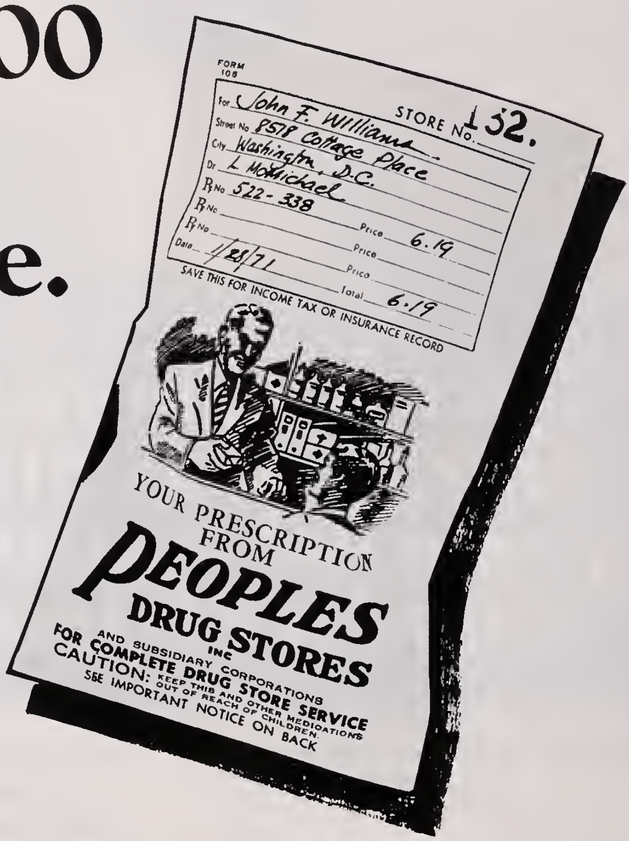
**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.,* excitement, stimulation and hyperactivity, have also been reported in rare instances.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
4 JUN 1971

The bag that has earned more than 125,000,000 votes of confidence.


FORM 108
For John F. Williams
STORE No. 152.
Street No 8518 Cottage Place
City Washington, D.C.
Dr L. McMichael
℞ No 522-338
℞ No
℞ No
Price 6.19
Price
Price
Date 1/28/71
Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD
YOUR PRESCRIPTION FROM
PEOPLES
DRUG STORES
INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN.
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

1121 Vermont Ave., N.W.
at Thomas Circle ................ 628-0720
Lee Highway & Old Dominion Dr.
(Arlington) .................... 522-0011
7128 Wisconsin Ave., & East-West Hwy.
(Bethesda) ..................... OL2-2380
7939 New Hampshire Avenue
(Langley Park) ................. 434-3121
Laurel Shopping Center (Laurel) ....... 776-7514
7534 Annapolis Road (Lanham) ....... 577-7282

PEOPLES®

PRESCRIPTION DRUG STORES

WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.

VOLUME 40 • MAY 1971

**EDITOR**

Wallace M. Yater, M.D.

**ASSISTANT TO THE EDITOR**

Judith E. Perruso

**MANAGING EDITOR**

Francisco P. Ferraraccio

**EDITORIAL BOARD**

Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**

Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Frank S. Bacon, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

**MEDICAL ANNALS**
of the
**DISTRICT OF COLUMBIA**

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to Dr. Wallace M. Yater, Editor, Medical Annals of the District of Columbia, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. Medical Annals will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the Annals is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the Medical Annals of the District of Columbia must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the Annals office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

You know
diuretics
medically.

Short-acting diuretics may create abrupt,
inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow
rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

Hygroton® chlorthalidone USP

Makes water, not waves.

But
have you
met them
socially?
LADIES

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-B

MEDICAL ANNALS
of the District of Columbia

## Contents for May

### SCIENTIFIC ARTICLES

Peritoneoscopy: A Useful Diagnostic Technique. *Nelson P. Trujillo, M.D.*, Washington 297

Current Evaluation of Anticholinergic Drugs. *Gladys Rosenstein, M.D., Herman Rosenstein, M.D., Devaughn E. Belton, M.D.*, and *Frances Dacosta, M.S.*, Washington 300

Rehabilitation of Indigent Arthritis Patients in the District of Columbia. *Geoffrey Booth, Gerald Goldklang* and *Henry Roth, M.D.*, Washington 304

Guidelines for Infant Feeding. *Karakart S. Gokulanathan, M.D., F.R.C.P., F.A.A.P.* and *Kannarkat P. Verghese, M.D.*, Washington 309

Progressive Systemic Sclerosis Simulating Idiopathic Pulmonary Fibrosis. Report of a Case. *M. Arthur Charles, CPT, MC*, Washington 313

A Case of Pre-eclampsia with Bell's Palsy and Concomitant Fetal Anomalies. *Aaron H. Gerber, M.D., F.A.C.O.G., F.A.C.S.* and *Monica J. Collins, M.D., F.R.C.P.*, Washington 317

Clinicopathologic Conference: Jaundice and Abdominal Pain in a 65-Year-Old White Woman. *Chandler Smith, M.D.*, Washington 320

### EDITORIALS

More on Methadone 337

The Stigma of Malpractice 338

### SPECIAL SECTION

History of the Medical Society of the District of Columbia. Chapter XI. *Theodore Wiprud* 331

### MISCELLANY

President's Page: "The Methadone Question. . ." 324

Letters to the Editor: "Doctors' Symphony Orchestra" 340

Clinical Center Study 340

D.C. Health Notes 341

Ladies Auxiliary 341

Summary of the Executive Board Actions 343

New Members 345

National & Regional Meetings 346

DOCPAC Briefs 346

General News 347

Book Reviews 354

Books Received 358

Obituaries 359

Classified Advertisements 16

*Medical Annals Staff and Officers of the Medical Society* *Adv. 3*

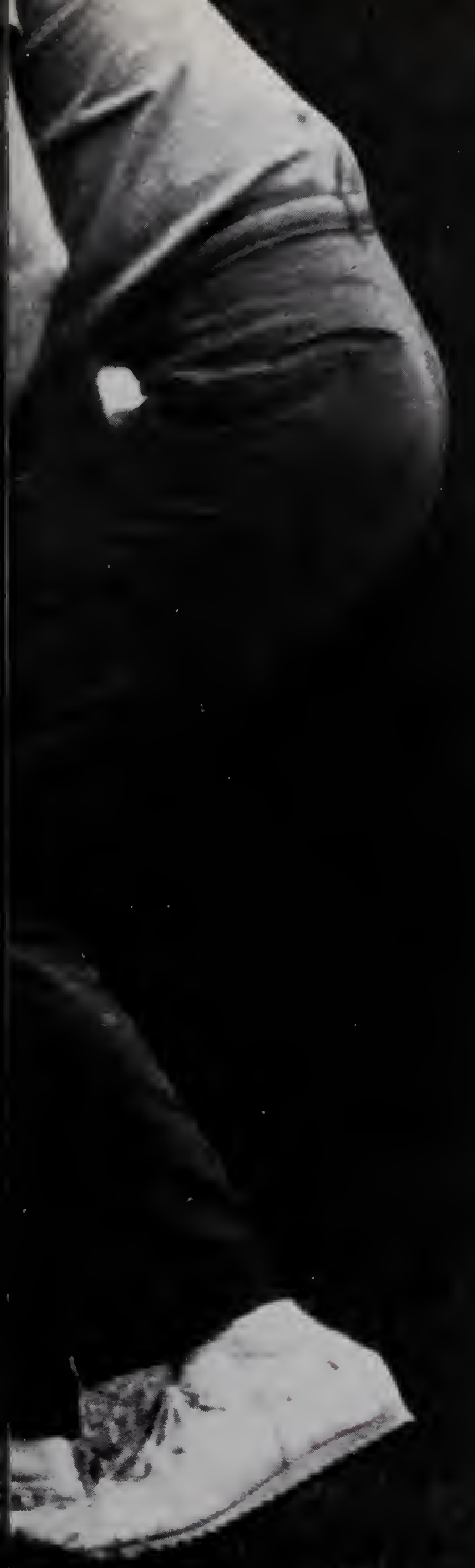
*Index of Advertisers* *Adv. 20*

---

Copyright ©, 1971 by The Medical Society of the District of Columbia. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

WHEN TRAUMA
RESULTS IN PAIN.

This photograph in no way implies the endorsement of Norgesic by Joe Namath.



# NORGESIC®

(orphenadrine citrate, 25 mg.; aspirin, 225 mg.; phenacetin, 160 mg.; caffeine, 30 mg.)

the versatile analgesic

offers fast onset of symptomatic relief

produces a high level of analgesia

affords sustained pain relieving action

provides predictable relief—
overall satisfactory response in
approximately 80% of patients

**Contraindications:** Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.

Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).

**Warnings:** USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.

**Precautions:** It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.

**Adverse Reactions:** Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established.

**Dosage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

**Riker Laboratories, Inc.**
NORTHRIDGE, CALIFORNIA 91324
A SUBSIDIARY OF 3M COMPANY

lorgesic...the versatile analgesic
rovides effective analgesia and relief
f associated muscle spasm

Now
available for your
prescribing
needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

Lilly

000121

MEDICAL ANNALS
of the District of Columbia

May 1971
VOLUME 40 • NUMBER 5

# Peritoneoscopy: A Useful Diagnostic Technique

NELSON P. TRUJILLO, M.D.*

PERITONEOSCOPY IS AN ENDOSCOPIC examination of the peritoneal cavity and some of its contents. This is accomplished by inducing a pneumoperitoneum and inserting an endoscope through a small puncture in the abdominal wall. The procedure also allows the performance of direct-vision biopsies. It is carried out under local anesthesia in an endoscopy, treatment, or in-out surgical room.

Although peritoneoscopy was decribed in 1902[1], it has not been until the last few years with the advent of fiberoptic instruments, that the procedure has gained popularity. The newer instruments and their light-systems allow excellent visualization of intra-abdominal structures and photography.

## Technique

The patient is fasted overnight and premedicated with meperidine, phenergan and atropine. The abdominal wall is cleaned with surgical soap and merthiolate; the abdomen is draped. The site for puncture, usually midline below the umbilicus, is anesthetized. A 7-10 mm skin incision is made, and blunt dissection is carried to the fascia. The pneumoperitoneum needle is inserted, and pneumoperitoneum is created. Through the same incision the trochar and endoscope are inserted. At the completion of the procedure the air is removed from the abdominal cavity and the skin closed with 2 silk sutures.

There are no restrictions following the procedure unless biopsies are obtained, in which case bed-rest for 24 hours is ordered.

There is minimal discomfort during and after the procedure. There may be some residual soreness in the shoulder for 24-48 hours due to infra-diaphragmatic residual air.

## Capabilities

The parietal peritoneum can be readily visualized and evaluated for abnormal vasculature (evidence of portal hypertension) or nodules. The latter can be readily removed for biopsy.

The anterior surfaces, much of the upper surfaces, and a portion of the undersurface of the liver can be well seen. The interlobar fissure and the falciform ligament are well visualized. The liver can be evaluated as to nodularity, size, color, focal lesions, etc.

The gallbladder can be visualized in over 60% of cases, and impression as to wall-thickness, color and vascularity can be obtained.

Splenomegaly can be detected with the patient in the supine position, and a normal spleen may be often visualized by tilting the patient to a right-lateral decubitus.

The anterior wall and greater curvature of the stomach can be seen as well as the underside of the diaphragms and anterior surfaces of the omentum, colon, and small bowel.

The pelvic organs may be seen by tilting the table head-down; and by special manipulation, the posterior cul-de-sac, tubes and ovaries may be inspected.

Biopsy or suction needles may be directed by visual control to abnormal structures or organs for biopsy or sampling of fluid.

Although special procedures, such as transhepatic cholangiography, cholecystography, cholangiography and splenoportography have been described in conjunction with peritoneoscopy,[2,3] I rountinely do not perform any of them. I believe they greatly increase the morbidity of the procedure and are seldom of significant diagnostic importance. I also do not routinely needle cystic lesions for similar reasons and believe that drainage at the time of surgical intervention is more appropriate.

## Clinical Value of Peritoneoscopy

The features of peritoneoscopy which contribute to its value are its simplicity of performance, low morbidity, even in relatively poor risk patients, and the wide range of differential diagnostic possibilities it affords.

---

* Chief, Gastroenterology, The George Washington Medical Division, D.C. General Hospital, 19th and Massachusetts Avenue S.E., Washington, D.C. 20003; Clinical Instructor in Medicine, The George Washington University School of Medicine.

I shall now review the indications and results of 80 consecutive peritoneoscopies I have performed over the last 2 years.*

In 8 patients, hepatomegaly with a high clinical suspicion of malignancy and a normal percutaneous liver biopsy were the indications. In 7, carcinomatous implants of the liver were found. In the other, post-necrotic cirrhosis was present.

In 14 patients with known cirrhosis of the liver the procedure was done because of suspicion of tumor. In 5 patients a hepatoma was found. In 8, the presence of cirrhosis was confirmed and no tumor found. In 1, in addition to the cirrhosis, an infarct of the liver was noted.

Twelve peritoneoscopies were done because of protracted jaundice of undetermined etiology. In 6 of these I found evidence of extrahepatic obstructive disease, and these were promptly submitted to laparotomy. Four had carcinoma of the head of the pancreas and 2, biliary tract disease. Two of the 12 patients were found to have chronic active hepatitis; 4 of the 12 had active cirrhosis; 1 of these also had casseating granulomas on liver biopsy.

In 6 patients the presence of an abnormal liver scan, usually showing poor uptake in the left lobe, was the indication for the procedure. Two patients were normal, and the other 4 represented 1 each of the following: hepatoma, Riedel's lobe, chronic active hepatitis, and hepatic steatosis.

In 15 patients ascites of undetermined etiology was the indication. The ascitic fluid usually had the characteristics of an exudate. Three patients had tuberculosis peritonitis. Five of the 15 had metastatic tumor implants on the peritoneal surface, 2 of these from linitis plastica of the stomach. Five patients had cirrhosis of the liver. In the 2 remaining patients an adnexal tumor was found in 1 and no intra-abdominal cause for ascites was found in the other.

In 23 patients hepatomegaly was the primary reason for performing peritoneoscopy. In many of these a history of tumor, an abnormal liver scan, or concomitant ascites made peritoneoscopy the procedure of choice rather than closed percutaneous biopsy. Two patients, each with the following conditions were found: granulomas in the liver, postnecrotic cirrhosis, lymphoma, metastatic tumor to the liver, steatonecrosis of the liver, drug hepatotoxicity, hepatoma, and normal. Five of the 23 patients had steatosis of the liver. In 2 patients the liver could not be visualized because of adhesions and a thick omentum.

In 2 patients the procedure was done because of right upper-quadrant pain and fever. In 1 case miliary granulomas of the liver and adhesive perihepatitis were found, and the other was normal with the exception of profound visible spasm of the transverse colon with reproduction of the patient's pain.

In all but 2 of the 80 patients the goal of the procedure was attained, i.e., the question posed was answered. In 1 of these 2 patients there were many adhesions which precluded visualization of any intra-abdominal structure. This was considered as a likely possibility prior to doing the procedure, and it was thought it would be worth trying in spite of this. In the other the liver was covered by an adherent omentum, thus precluding visualization of the liver.

## Indications

The indications for the procedure may be summarized as follows:

1. High index of suspicion of hepatic metastatic tumor with a normal percutaneous biopsy.
2. Suspicion of hepatoma in a patient with cirrhosis of the liver.
3. Protracted jaundice of unknown etiology, especially those with equivocal tests of liver function.
4. Abnormal liver scans, especially those showing defects of the left lobe.
5. Ascites of undetermined etiology.
6. Hepatomegaly, especially those patients in which a history of tumor, an abnormal liver scan, or ascites makes peritoneoscopy with direct vision biopsy of the liver the procedure of choice rather than blind percutaneous liver biopsy.
7. Staging of patients with Hodgkin's disease.
8. Fever of unknown etiology.

## Morbidity and Mortality

One of the most desirable characteristics of the procedure is its low morbidity and mortality. In this series I have had no morbidity or mortality associated with the procedure. In 1 patient there was excessive bleeding from a liver biopsy site which required 2 blood transfusions. The excessive bleeding was detected at the time of peritoneoscopy, and blood transfusions were ordered when there was a decrease in the packed cell-volume.

Mortality due to peritoneoscopy is quite low. A review of 11,048 cases showed only 6 deaths, and these were attributed to improper case selection or deviation from prescribed technique.[4] Hazards of the procedure do exist, however, such as subcutaneous emphysema, wound sepsis, perforation of a viscus, major vessel injury, hemorrhage, shock, and even death.

---

* Excluded from consideration are 40 procedures performed in conjunction with Dr. Vincent DeVita, Head, Solid Tumor Service, National Institutes of Health, as part of a study in staging patients with Hodgkin's disease.

### Contraindications

Absolute contraindications to the procedure are acute surgical conditions of the abdomen, infections of the anterior abdominal wall, acute myocardial infarction, and marked respiratory insufficiency with hypercapnea.

Relative contraindications are previous surgical interventions (increased likelihood of adhesions which may preclude visualization and increase risk of perforation), congestive heart failure, chronic obstructive pulmonary disease, marked anemia, and other debilatating conditions.

Ascites is not a contraindication, but there will be leakage of fluid from the puncture site for 24 to 48 hours in addition to the amount removed to visualize intra-abdominal structures. Since biopsy specimens are usually obtained at the time of the procedure, coagulation studies should be within a safe range.

### Comments

The limitations of peritoneoscopy are important to bear in mind. They include inability to visualize every intra-abdominal structure or to see all of those which can be brought into view; inability to directly feel any of the structures, and inability to give therapeutic benefit.

Although peritoneoscopy is a procedure of choice for intra-abdominal examinations, in many cases it will not and cannot wholly supplant laparotomy for purposes of examination not only because its usefulness is limited to the visually accessible regions of the peritoneal cavity, but also because under certain conditions the procedure is definitely contraindicated. However, in a large group of patients with liver disease, hepatitis, cirrhosis and carcinoma, and for patients with ascites, the question of exploratory laparotomy does not usually arise, whereas the need for peritoneoscopy is often present. The procedure has the advantages that it can be performed in patients considered poor surgical risks, that it does not require general anesthesia, and that it has little morbidity and a short recovery time.

### Conclusion

Peritoneoscopy is a useful diagnostic technique. It is not intended as a replacement of other diagnostic modalities, but only as a complimentary measure in certain selected cases. The method is especially applicable to patients with liver and neoplastic diseases and ascites. My experience with its diagnostic use in clinical practice has been presented.

### References

1. KELLING, G.: Ueber Oesophagoskopic, Gastroskopic und Kolioskopic. Muenchener Medizinische Wochenschrift, 1902, 49, 21.
2. LEE, W. Y.: Evaluation of Peritoneoscopy in Intra-abdominal Diagnosis. Gastroent. Rev. 1942, 9, 133.
3. VILLA, F., STEIGHMANN, F., HYMAN, S., PERREAULT, G., AND ZALAR, R: Peritoneoscopy in Obscure Abdominal Diseases. Amer. J. Gastroent. 1963, 40, 363.
4. UHLICH, G. A. AND HAUBRICH, W. S.: Laparoscopy (Peritoneoscopy) and Guided Liver Biopsy, Amer. J. Gastroent. 1962, 38, 313.

# Current Evaluation of Anticholinergic Drugs*

GLADYS ROSENSTEIN, M.D., HERMAN ROSENSTEIN, M.D.
DEVAUGHN E. BELTON, M.D.,
AND FRANCES DACOSTA, M.S.

TODAY OPINION IS STILL divided on the role of anticholinergic drugs in the practice of modern scientific medicine. They are defined as those drugs which "interfere with physiologic functions that are dependent on cholinergic nerve transmission."[1] They are parasympatholytic, suppressing the parasympathetic division of the autonomic nervous system.

Many physicians include use of this class of drug in their first therapy for patients with any type of abdominal distress, pain, or spasm associated with dysmenorrhea and gastrointestinal or genitourinary disturbances. Their use without accurate diagnosis is prevalent. Many of the indications listed for anticholinergic drugs can be diagnosed only by laboratory tests or X-ray examinations rather than by clinical evaluation. Because of possible inherent dangers, the use of these drugs should be cautious in the absence of proven diagnosis.

Anticholinergic drugs may be divided into 2 classes: those acting primarily on the peripheral parasympathetic system with minimum cerebral action and those acting primarily on the central nervous system with a sedative effect.[2] This paper is concerned with the first class and will emphasize their gastrointestinal effects.

## Brief Pharmacologic Review

The autonomic nervous system has 2 divisions: the parasympathetic or cholinergic (the cranial-sacral outflow) and the sympathetic or adrenergic (the thoraco-lumbar outflow). Sympathetic effects are associated with an epinephrine-like mediator and parasympathetic effects with acetylcholine. The latter is liberated at all autonomic ganglia and at parasympathetic post-ganglionic nerve-endings, sympathetic postganglionic fibers to sweat glands, nerves to the adrenal medulla, and somatic motor nerves. Anticholinergic agents do not prevent the release of acetylcholine but prevent its action by occupying receptor sites or by a depolarizing action.

The sympathetic system sustains the body in times of "fear and flight" by the following actions: The pupil dilates (mydriasis), the heart beats faster, and the blood pressure rises. There is an increased flow of a viscous saliva. Turnover of glycogen to glucose in the liver (glycogenolysis) increases, resulting in an elevated blood sugar. The tone and motility of the smooth muscles of the stomach and intestines relax, with a decrease in secretions. Usually the sphincters contract. Catecholamines are released from the adrenal medulla.[3-5]

Stimulation of the parasympathetic nervous system is manifested by constriction of the pupil (myosis), bradycardia, a decrease in blood pressure, vasodilation, and secretion of thin, watery saliva; the motility, tone, and secretions of both the stomach and the intestines are increased, and as a rule the gastric and urinary sphincters relax.[3-5]

## Discussion

The perfect anticholinergic drug would act selectively on a specific target organ without affecting multiple systems and without undesirable side-effects. Anticholinergic drugs useful in gastrointestinal disorders should have 4 effects: (a) decrease pepsin; (b) prevent hyperacidity by decreasing both the volume of secretion and the amount of hydrochloric acid secreted so as to maintain the gastric contents at a pH above 4.5,[6] (c) decrease motility and propulsive motion; and (d) relax abnormal smooth muscle tone and relieve spasm.

Of the anticholinergic drugs currently marketed, many are selective in their action; some affect either gastric secretion or gastrointestinal motility while others do both. Thus it is necessary for the physician to familiarize himself with the specific modality of the drugs of his choice and relate them to the clinical indications for use, particularly when anticholinergics are used in the treatment of acute pancreatitis. Most physicians[7-9] concur that parenteral use of certain of the anticholinergics may be a helpful adjunct in medical therapy for this condition.

---

* From the Bureau of Drugs, Food and Drug Administration, Department of Health, Education, and Welfare, Washington, D. C. 20204.

Requests for reprints should be addressed to Dr. Gladys Rosenstein, Bureau of Drugs, Food and Drug Administration, Department of Health, Education, and Welfare, Washington, D. C. 20204.

There are different schools of thought as to how these drugs act in acute pancreatitis. Ingelfinger[8] and Schapiro and Wruble[10] noted that anticholinergic drugs may inhibit release of secretin. However, once secretin has been released, the attempt to block its effect on the pancreas would require large doses of the anticholinergic drug, thus limiting the effectiveness of such medication.[11] Vagal stimulation produces an increase in gastric secretion and acidity, triggering the release of secretin and pancreozymin from the duodenum, which in turn stimulates the pancreas.[8,9] However, as Ingelfinger[8] pointed out, part of the therapy for acute pancreatitis is constant gastric suction, which directly removes gastric secretion and acid. Anticholinergic drugs may also have a direct effect on the pancreas and suppress pancreatic secretions of water, bicarbonate, and enzymes.[8,9] Thomas[12] studied the effect of intravenous administration of anticholinergic drugs on dogs after pancreatic secretion had been stimulated by secretin given intravenously and by direct insertion of hydrochloric acid, soap solution, or peptone into the lower duodenum or upper jejunum. Both volume and enzyme content of pancreatic juice decreased.

Shimoda and Rubin[13] reported that a 49-year-old male patient with Zollinger-Ellison syndrome was successfully treated for 9 months with large doses of an oral anticholinergic drug to suppress gastric secretion prior to more definitive cure by total gastrectomy.

Controversy still exists over the use of anticholinergic drugs in peptic ulcer, especially in gastric ulcer when the gastric acidity may not be in excess.[14] Some physicians, however, recommend that in the absence of contraindications they should be included as adjunctive gastric ulcer therapy.[8] Bachrach[15] observed that it is usually decreased gastric acidity that produces freedom from symptoms, but he and others[7] have noted reports of cases in which ulcer pain was relieved by the use of anticholinergic drugs without actual decrease in acidity.

Bachrach[15] also found that after gastric secretion was stimulated by histamine or parasympathomimetic agents, anticholinergic drugs decreased the acidity; however, very large doses were required to counteract the acidity associated with insulin-induced hypoglycemia, and these drugs may not affect the acidity produced by food intake.

Piper and Stiel[16] used anticholinergic drugs to counteract the gastric acidity produced by hypoglycemia in psychiatric patients given insulin-shock therapy. They found a decrease in both volume and acidity of gastric secretion and some decrease in potassium and sodium content. Piper[14] and others[7] observed that anticholinergic drugs may lower gastric secretion but not necessarily decrease the acidity of the gastric juice nor decrease pepsin. The parasympatholytic drugs may decrease basal night secretion.[8,15] Sun[17] stated that although anticholinergic agents may not effectively decrease gastric acidity produced by eating, they may decrease acid secretion during the basal and interdigestive night secretion. Roth et al[18] observed that, while anticholinergic drugs may relieve ulcer pain, they may also mask the symptoms of ulcer complications or change the pattern of ulcer symptoms.

Posy et al[19,20] found that single doses of the anticholinergic drugs which they studied decreased production of gastrin in dogs but failed to abolish it. They further noted that an acid rebound occurred 4 or 5 hours after the medication. However, daily long-term administration produced a decrease in gastric acidity and parietal cell-mass. This effect persisted for 4 weeks after medication was discontinued. These investigators reported the interesting observation that both milk and antacids may act as a stimulus to gastrin formation in the dogs studied, and that gastrin was still produced, although in smaller quantities, when large doses of the anticholinergic drug were used to combat the gastrin production. Kowalewski[21] also found a decrease in parietal cell-mass in his rat study using long-term anticholinergic drugs. Caridis and Smith[22] studied patients with duodenal ulcer whose gastric acidity was maximally stimulated with histamine, and found that although 0.6 mg. of atropine sulfate reduced the pepsin secretion, the acidity content was only a little reduced. The anticholinergic drug they studied decreased the pepsin and gastric acidity but at that dosage produced hypotension.

Questions also remain unanswered as to the role that anticholinergic drugs play once the peptic ulcer is "healed". Does long-term use prevent recurrences? Do the drugs prevent complications such as hemorrhage and/or perforation? Do they significantly reduce the number of patients who eventually require surgical operation? Sun,[6] on the basis of a single blind study in 1962 and a double-blind study in 1964,[17] reported that anticholinergic drugs given over long periods of time (2 years) decreased recurrence rates in patients with healed duodenal ulcers. Different drugs were used in each study. However, he did note that anticholinergic drugs do not "prevent" ulcers from forming. Other physicians[8,15,18,23] report either that these drugs have little effect on shortening the healing time of an ulcer or lengthening the interval of recurrences or that the effect is not known.[7] Limited statistical data are available on their use in preventing complications or the need for surgery. Some clinicians prescribe those anticholinergic drugs which have a specific modality to inhibit intestinal motility and propulsion as adjunctive therapy for diarrhea associated with the irritable bowel syndrome,[8] while others debate their effectiveness.[15] This specific modality to delay motility may produce the adverse effect of constipation. Therefore, the use of these drugs in functional constipation to relieve the suspected "spasm" may make the constipation worse.[15] If the "spasm" is a result of stress or tension, sedation by itself may be all the therapy needed.

The use of these drugs in infant colic is questionable,[24] first, because the pediatric dose in many instances has not been safely established, and second, because the etiology of this "syndrome" is multiple.

Anticholinergic drugs have also been used parenterally as an aid in better visualization both in gastroscopy[25] and in X-ray examinations for hypotonic duodenography. Their use as an aid in diagnostic procedures may occasionally produce gastric atony, particularly in those with impaired hepatic and renal functions and in the debilitated elderly person.

From the basic physiologic action of anticholinergic drugs it can be seen that they are contraindicated in glaucoma, obstructive disease of the gastrointestinal and genitourinary diseases, and treatment of patients whose intestinal tone is decreased, such as in the aged or debilitated. As noted above, the gastric atony which these drugs may produce can be harmful. They are also contraindicated in patients with gastrointestinal hemorrhage.[18] Since the activity of the vagus is suppressed, the cardiovascular system may not respond normally to the hemorrhage, and tachycardia may result.

One of the complications of ulcerative colitis is toxic megacolon. The use of anticholinergic drugs in this condition is contraindicated.[26] In fact, these drugs should be used with great caution in any patient with ulcerative colitis, since they may precipitate an ileus or megacolon.[26] Scharer and Burhenne[27] reported a case of "nontoxic" megacolon, dilatation of the uterus, and retention of urine in a 70-year-old woman given an anticholinergic drug combined with polycarbophil for the treatment of diarrhea which later proved to be due to ulcerative colitis. They observed that the bowel dilatation was not a direct result of the ulcerative colitis but was due to the drug itself. Ingelfinger[8] stated that anticholinergics do not aid in the diarrhea of ulcerative colitis but may be helpful in functional diarrheas.

Great caution should be utilized in prescribing them for patients with advanced hepatic or renal disease or for pregnant women. Their use in pregnancy and lactation requires that the potential benefits of the drug be weighed against its possible hazards to the mother and child. An inhibiting effect on lactation may occur.

The anticholinergics may produce many adverse effects, including urinary hesitancy with slowing of the stream, blurred vision, mydriasis, increased ocular tension, loss of taste, xerostomia, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, constipation, bloated feeling, impotence, severe allergic reactions, urticaria, dermatitis, mental confusion and/or excitement especially in elderly patients, and decreased sweating. They should not be used in the treatment of hyperhidrosis, however, because of the possible adverse effects.[15] Other effects include tachycardia and palpitation, indicating the need for great caution for use in cases of hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Many physicians consider some dryness of the mouth and slight slowing of the urinary stream as evidence that the drug is having an adequate pharmacologic effect rather than an adverse effect.[6,7,14,15,23]

With reference to the effects of anticholingeric drugs on brain function Wikler[28,29] has offered the premise that there is a typical electroencephalogram pattern during periods of both sleep and waking ("behavior pattern"). In 1952 he noted that when dogs were given large doses of atropine the electroencephalogram did not always show the typical behavior pattern. He called this "pharmacological dissociation."[28,29] This phenomenon has also been demonstrated in other species of animals such as rats, cats, monkeys, and rabbits.[29] Other investigators[30] disagree with the term "dissociation" but note that drugs which change the EEG pattern produce behavioral changes (changes in "differentiated consciousness and psychomotor performance.")

Longe and Scotti DeCarolis[31] described "the central anticholinergic brain syndrome". It includes "profound behavioral and psychic disturbances such as impairment of memory, slurred speech, drowsiness, impaired motor ability, a state of confusion and disorientation, and feelings of unpleasantness and hallucinations, both auditory and visual." In low doses anticholinergics may produce drowsiness and a delirium-like, confused, fearful state,[30] and in very large doses, deep somnolence. From his animal studies[32] Herz observed that anticholinergic drugs could possibly interfere with recent memory processes.

Although our primary concern with anticholinergic drugs is limited to peripheral rather than central use, these interesting experimental studies are included to show that when patients are sensitive even to small doses of these drugs or when the dose is sufficiently large some patients could exhibit such central adverse reactions such as drowsiness, insomnia, and mental confusion.

In the present era of drug abuse apparently anticholinergics such as atropine, scopolamine, and belladonna are also being abused. It was recently pointed out that acute intoxications with these drugs may produce many of the adverse effects described above plus "amnesia, nonsensical answers, visual hallucinations without perceptual distortion, and body-image altered".[33] It was also noted that there is no specific withdrawal syndrome.

## Conclusions

The physician should familiarize himself with the pharmacologic modality of each anticholinergic drug he prescribes. He should know whether it decreases gastric acidity or gastrointestinal motility and propulsion, or both. He should also know the site of its effectiveness in the gastrointestinal tract. Such understanding is necessary in order to relate the drug to the disease to be treated.

Finally, the physician should also familiarize himself with the contraindications, the warnings, precautions, and adverse effects. Anticholinergic drugs, in some patients, may not be as innocuous as they appear.

## References

1. New Drugs, 1967 edition. Chicago: American Medical Association, p. 441.
2. SMITH, V. E.: Med. Clin. N. Amer., 1964, 48, 399.
3. BEST, C. H., AND TAYLOR, N. B.: The Human Body, 4th edition. New York: Holt, Rinehart & Winston, p. 525.
4. GOODMAN, L., AND GILMAN, A.: The Pharmacological Basis of Therapeutics, 3rd edition. New York: Macmillan, 1965, p. 404.
5. QUILLIAM, J. P.: Practitioner, 1968, 65, 200.
6. SUN, D. C. H.: Ann. N. Y. Acad. Sci., 1962, 99, 104.
7. SOERGEL, H. H., AND HOGAN, W. J.: Amer. J. Dig. Dis., New Series, 1964, 9, 657.
8. INGELFINGER, F. J.: New Eng. J. Med., 1963, 268, 1454.
9. BOCK, O. A. A., ET AL: Gastroenterology, 1968, 55, 199.
10. SCHAPIRO, H., AND WRUBBLE, L. D.: Gastroenterology, 1969, 56, 640.
11. SCHAPIRO, H., ET AL: Amer. J. Dig. Dis., New Series, 1968, 13, 608.
12. THOMAS, J. E.: Amer. J. Physiol., 1964, 206, 124.
13. SHIMODA, S. S., AND RUBIN, C. E.: Gastroenterology, 1968, 55, 695.
14. PIPER, D. W.: Gastroenterology, 1967, 52, 1009.
15. BACHRACH, W. H.: Amer. J. Dig. Dis., New Series, 1958, 3, 743.
16. PIPER, D. W., AND STIEL, M. C.: Gut, 1961, 2, 230.
17. SUN, D. C.: Amer. J. Dig. Dis., New Series, 1964, 9, 706.
18. ROTH, J. L. A., WECHSLER, R. L., AND BOCKUS, H. L.: Gastroenterology, 1956, 31, 493.
19. POSEY, E. L., JR., GODGREY, D., SMITH, P., AND SAMS, J.: Southern Med. J., 1965, 58, 185.
20. POSEY, E. L., JR., ELLIOTT, R., ALDRIDGE, R., TURNER, C., AND FRANKLIN, H.: Amer. J. Dig. Dis., New Series, 1966, 11, 421.
21 KOWALEWSKI, K.: Canad. J. Physiol. Pharmacol, 1969, 47, 202.
22. CARIDIS, D. T., AND SMITH, G.: Brit. J. Surg., 1968, 55, 185.
23. KIRSNER, J. B., AND FORD, H.: Cur. Ther. Res., 1965, 7, 116.
24. ANON.: Drug. Ther. Bull., 1965 (December 24), 3, 102.
25. BAROWSKY, H., GREENE, L., AND PAULO, D.: Gastroint. Endosc., 1966, 12, 23.
26. SMITH, F. W., ET AL: Gastroenterology, 1962, 42, 233.
27. SCHARER, L. L., AND BURHENNE, H. J.: Amer J. Dig. Dis., New Series, 1964, 9, 268.
28. WIKLER, A.: Proc. Soc. Exp. Biol. Med., 1952, 79, 261.
29. BRADLEY, P. B., AND FINK, M., EDITORS: Anticholinergic Drugs and Brain Functions in Animals and Man. Amsterdam: Elsevier Publishing Co., 1968, p. 3.
30. ITIL, P., AND FINK, M.: Ibid., p. 149.
31. LONGO, V. B., AND SCOTTI DE CAROLIS, A: Ibid., p. 106.
32. HERZ, A.: Ibid., p. 73.
33. ANON.: Med. Lett. Drugs Ther., 1970 (August 7), 16, 12.

SUPPORT YOUR MENTAL HEALTH ASSOCIATION

# Rehabilitation of Indigent Arthritis Patients in the District of Columbia*

GEOFFREY BOOTH[†], GERALD GOLDKLANG[‡] AND HENRY ROTH, M.D.[§]

THE RHEUMATOLOGY CLINIC of the Georgetown University Medical Division at D. C. General Hospital maintains a policy of close coöperation with the local branch of the Department of Vocational Rehabilitation of the District of Columbia, in the interest of providing arthritis patients with maximum restoration of independent function in the community and economic productivity. It is felt that these goals are an integral part of the mission of a rheumatology service seeking to secure for its arthritis patients the benefits of exemplary comprehensive care. Accordingly, all patients attending this Rheumatology Clinic are referred to the Department of Vocational Rehabilitation for evaluation, job training, and placement as soon as they are deemed ready for such services.

The object of this project was to evaluate and describe the scope and results of efforts to rehabilitate arthritis patients during a defined time interval by conducting a follow-up study on 31 patients who had been referred to the Department of Vocational Rehabilitation (DVR) by the Georgetown Rheumatology Clinic at D. C. General Hospital between April 1969 and April 1970. In some instances the patient was able to undertake job training and/or job placement; in other cases the major service provided by the DVR was the purchase of prostheses or the finding and financing of services (such as dental work) which would enable the individual to become more independent and self-sufficient in caring for himself and managing his household.

## Description of DVR Procedures

Rehabilitation services are made available to all disabled persons in the District of Columbia who are eligible. Eligibility is defined by the following criteria: (1) residence in the District of Columbia, (2) the presence of a disabling condition resulting in functional limitation(s) of activities, (3) the presence of a handicap to employment as a result of a disabling condition, and (4) a reasonable expectation that vocational rehabilitation services can render the individual capable of carrying out functions as a homemaker in the case of aged or severely disabled clients or, more hopefully, that such services can render the individual fit to engage in gainful employment.

When a potential client is referred to the DVR a survey interview is taken and a decision is made as to whether or not the patient is accepted for further evaluation. The medical history and the financial status of the client are considered part of such an evaluation. In certain instances an extended evaluation may be indicated, and the case is placed in abeyance for a maximum of 6 months so that the applicant's rehabilitation potential may be considered in the light of his physical or financial status. In other instances, such as mental retardation, blindness, deafness, paraplegia, or brain damage, there may be an 18-month extended evaluation period. If the client is accepted a vocational diagnosis is made, and the predicted future state of health is taken into account. A vocational objective is specifically stated, outlining, insofar as possible, the total program of services necessary to achieve the optimal feasible rehabilitation objective. This includes a description of all the proposed services for the client's job preparation or adjustment, including training, placement, physical restoration, counseling, and follow-up. Physical restorative measures may include such additional services as supplying eyeglasses or dental work, even when such handicaps had not initially been construed as the major problem. When the rehabilitation program provides for any paid services such as bus tokens, books, supplies, and prosthetic appliances, a brief statement is made outlining the financial status of the client in terms of available resources and justification for financial supplementation in order to complete the proposed plan for rehabilitation. Throughout the evaluation and (if applicable) the training period, counseling and guidance are offered to help the client recognize realistically his strong points and limitations. Such guidance may be based on the results of psychological testing and interpretation of the vocational significance of medical evaluations.

---

*Portions of this work were conducted as part of a study in connection with the Medical-Dental Summer Apprenticeship Program of the Department of Public Health of the District of Columbia (U. S. Public Health Service, Medical-Dental Apprenticeship Training Grant No. 5-A07-AH-00186-03).

[†] Second-year medical student, Georgetown University School of Medicine, 3900 Reservoir Road N. W., Washington, D. C. 20005.

[‡] Second-year medical student. George Washington University School of Medicine, 1335 H Street N. W., Washington, D. C. 20005.

[§] Assistant Professor of Medicine, Georgetown University School of Medicine, 3900 Reservoir Road N. W., Washington, D. C. 20007; Chief, Rheumatology Section, Georgetown Medical Division, D. C. General Hospital.

After such evaluations, patients are classified as to whether physical restoration must be completed before training is begun; training and restoration can occur simultaneously, or training can be begun without the need for physical restoration services. Such training might include school training in a public or private school or employment or on-the-job training at some other facility or by an individual teacher or institution. When services have been completed and the patient is prepared for employment, efforts are taken to effect a satisfactory placement. When such placement is made a periodic follow-up of job adjustment is made. Thirty days of satisfactory performance in a job is considered as a minimum before closure of the case. A case may be closed as "rehabilitated" when the program of rehabilitation has been completed as far as possible, "substantial" rehabilitation services have been rendered, and the client is suitably employed. Cases may also be closed after the rehabilitation plan has been initiated but cannot, for some reason, later be carried forward to the goal of satisfactory vocational resettlement. Cases may also be closed for a number of other reasons, for example, failure of the client to respond to correspondence.

The DVR has a number of channels through which it may operate to procure a job for a patient. One is the Manpower Training and Employment Services Administration-DC (MTESA-DC). To facilitate placement services, MTESA has established the Washington Metropolitan Area (WMA) Job Bank. The DVR has been designated as one of the agencies authorized to utilize the Job Bank for its clients. From a procedural standpoint a DVR counselor may notify a Job Officer Counselor within the Department, who has a list of companies that are willing to hire the handicapped and have a history of doing so. The counselor might also utilize the Job Bank for the placement of a patient. In certain rare instances, if the patient has graduated from training school, the school takes it upon itself to place the individual in a job. For some types of employment in the "easier-to-place" category the DVR counselor may contact various companies directly in an attempt to place the patient.

## Objectives

This study sought to develop information concerning (1) the major means of support of patients before and after rehabilitation, (2) any changes in the patients' income after the onset of their illness and after vocational rehabilitation, (3) any change attributable to DVR services in mobility, independence, or self-sufficiency which has made the patients more comfortable and productive as housekeepers and members of the family unit, and (4) the role, if any, that loss of Welfare may play in discouraging "rehabilitated" patients from seeking employment and remaining financially self-sufficient.

## Methods

The study grew out of the case files of the 31 patients who had been treated in the Georgetown Rheumatology Clinic at D. C. General Hospital and who were referred from that clinic to the DVR between April 1, 1969, and March 31, 1970. Each patient was first contacted by telephone, notified of the study, and then asked to name a convenient time for a home interview. If he could not be reached by phone he was contacted by mail at the address in DVR files and again asked for an interview. If the letter was returned unopened with a postal marking of "addressee unknown" or "moved–left no forwarding address," we called the Public Assistance file room to ask for the last known address in their files if, as was often the case, they had been in contact with the patient.

In order to insure a systematic interviewing technique we devised a standard questionnaire, the questions of which were read to the patient during the personal interview. The patients' answers and comments were recorded by a member of the interviewing team. The bulk of the interviews were done at home, although some patients were seen either at the Rheumatology Clinic or in the Physical Medicine Department of D. C. General Hospital (if they were still coming for therapy). Some interviews were done by phone if no meeting time could be arranged with them.

The standard questionnaire probed for various income statements (in dollars per week) and asked the patients to list their current and past means of support. They were also asked to express a subjective evaluation of their rehabilitation experience and to candidly admit whether or not Welfare was, in fact, a negative incentive to their going back to work, even part time. Medical and demographic information was also obtained for each patient, including diagnosis, age, marital status, etc.

### Results

Twenty-eight people (12 men and 19 women) were located and interviewed. One patient was found to have died; 2 others could not be contacted. The age distribution is given in table 1. The diagnosis distribution is shown in table 2.

TABLE 1: Age Distribution

| Age Range | No. of Patients |
|---|---|
| 16-25 | 1 |
| 26-35 | 2 |
| 36-45 | 0 |
| 46-55 | 8 |
| 56-65 | 14 |
| Over 65 | 3 |

**TABLE 2: Diagnosis Distribution**

| Diagnosis | No. of Patients |
|---|---|
| Rheumatoid arthritis | 12 |
| Gout | 8 |
| Systemic lupus erythematosus | 3 |
| Osteoarthritis | 3 |
| Other | 2 |

Twenty-one of the 28 clients (75 per cent) were unemployed at the time of the study. This number, however, includes housewives and unpaid family workers. Four were employed parttime, usually as paid babysitters or domestics, and 3 were working fulltime and admitted that their jobs were their major source of support.

Six said that their major source of support at the time of the study (after rehabilitation) was Social Security. Eleven were on Public Assistance; 2 were on retirement pensions; 2 were supported by their spouses; 1 was supported by another relative, and 6 lived on the income from their full- or parttime jobs.

Before they became ill 4 had been supported by Social Security, 8 by Public Assistance, and 1 by a retirement pension. Two had been supported by their spouses, 1 by another relative, and 12 by their own fulltime or parttime jobs.

Eleven patients reported that their overall DVR experience was positive and quite worthwhile, and 1 reported that she had had a negative experience; 16 expressed no strong feeling either way.

Fifteen reported that their overall income had decreased as a direct result of their rheumatologic illness (prior to rehabilitation efforts). Twelve said that their income had remained the same, and 1 reported that his illness had actually resulted in a higher income than before, apparently as a result of some type of compensation payment. The following tables show the specific effects of rheumatologic disease and subsequent rehabilitation on the income of our study population.

Of the 10 people who reported that their income decreased despite rehabilitation efforts, 5 reported an intercurrent deterioration of their physical condition. In 3 of these the new disability was due to some factor other than their original rheumatologic disorder (e.g., CVA, heart attack, accident). The other 5 reporting a decrease in income cited a "nonmedical" deterioration of the home situation, such as the death of the breadwinner, desertion by spouse, and forced retirement as the reason for deterioration of income despite rehabilitation efforts.

Apart from economic rehabilitation, when questioned concerning the effect of rehabilitative services on self-sufficiency and independence in self-care and household management, 19 reported that their mobility and comfort had been enhanced by DVR's services. Four of these further indicated that their newfound independence had allowed other members of the family unit to work and thus increase the overall income.

Of the 21 not working at the time of the study 10 expressed interest in returning to work. Eight members of the study population candidly admitted that the fear of a cut in Welfare payments was a major negative incentive to employment. Another 8 said that this was definitely not a factor. Twelve could not or would not answer the question.

### Discussion

In interpreting these data certain specific characteristics of the study group must be taken into account. Since eligibility criteria under which the originating rheumatology clinic operates serve to exclude patients from this clinic until after they have been impoverished by arthritis, the Clinic tends to concentrate on the most advanced, severely handicapped, and crippled cases of arthritis in the city--those with the least potential for economic rehabilitation. The group contained more women than men because of the natural distribution of rheumatic diseases in the population. These women might normally be regarded as unemployed by virtue of their role as unpaid household workers. A sizable proportion were near 65, the age of normal retirement in our culture, and this group contributed heavily to the number reporting that Social Security or Public Assistance was their major means of support.

Nevertheless, of the group of 28 about whom information was available, 12 had been restored to gainful employment, and at the time of the study 7 were still so employed, the remaining 5 having suffered reactivation or worsening of arthritis or the unexpected development of a new disease. In addition, 12 were rehabilitated as unpaid household workers (whose services have a definite economic value), and 4 were rendered sufficiently independent to enable some other member of the household to undertake outside employment.

Thus, the efforts of the DVR resulted in concrete economic gains for each of the 28 unselected patients studied, and in 23 the gains were sustained up to the time of study (4-16 months later). In view of the known devastating impact of chronic arthritis on earning capacity and economic status, this record of successful rehabilitation in concrete economic terms was an unexpected finding. It should lead to re-examination of generally held notions regarding poor motivation among arthritis patients and to intensification of efforts at rehabilitation of these patients (often considered "hopeless" cripples) and to expansion of resources for such rehabilitation. Tables 3-7 show the income status of patients before, during, and after rehabilitation efforts.

TABLE 3: Effect of Arthritis on Patients' Incomes Prior to Rehabilitation Effort

| | No. of Patients |
|---|---|
| Increased income | 1 |
| No change | 12 |
| Decreased income | 15 |

TABLE 4: Magnitude of Income Loss Due to Arthritis Among 15 Patients Reporting Such Loss

| | No. of Patients |
|---|---|
| Less than $10/week | 0 |
| $11-$20/week | 4 |
| $21-$30/week | 2 |
| $31-$40/week | 8 |
| $41-$50/week | 1 |
| Greater than $50/week | 0 |

TABLE 5: Effect of Rehabilitative Effort on Patients' Earning Capacity or Income

| | No. of Patients |
|---|---|
| Enabled to Increase income | 7 |
| Enabled to preserve existing earning capacity or income | 11 |
| Decrease in income despite rehabilitation effort | 10 |

TABLE 6: Magnitude of Income Gain of 18 Patients' Reporting Effective Rehabilitation Efforts

| | No. of Patients |
|---|---|
| Less than $10/week | 11 |
| $11-$20/week | 3 |
| $21-$30/week | 1 |
| $31-$40/week | 3 |
| $41-$50/week | 0 |
| Greater than $50/week | 0 |

TABLE 7: Magnitude of Income Loss Among Ten Patients' Reporting Such Loss Despite Rehabilitation Efforts

| | No. of Patients |
|---|---|
| Less than $10/week | 1 |
| $11-$20/week | 4 |
| $21-$30/week | 3 |
| $31-$30/week | 1 |
| $41-$50/week | 1 |
| Greater than $50/week | 0 |

The economic gains enjoyed by individual patients or households are inevitably reflected in economic gains for the community through improved purchasing power and in the conservation of public monies through higher taxes paid by employed individuals and reduced expenditures for public assistance payments, homemaking services, and institutional care, but calculation of the conversion factors for translating these secondary and tertiary effects into actual dollar amounts is beyond the scope of this investigation.

Just as important as economic gains, although harder to measure, are the intangible benefits to individuals, families, and the community accruing from the enhanced independence made possible by the services of the DVR to these chronically ill and disabled arthritis patients. Thus, the ability to enjoy greater mobility in the home and community, freedom from physical or economic dependence on other persons, relief of physical pain and emotional suffering, and enhancement of self-respect and dignity are worthwhile accomplishments in themselves, with far-reaching consequences, whose impact, although difficult to measure with the tools selected for the present investigation, must not be overlooked.

The rehabilitation histories of these 28 handicapped arthritis patients demonstrate the value of the integrated program of physical restoration and care, social rehabilitation, and economic resettlement which can result from close coöperation between the medical team and the rehabilitation agency. The rehabilitation agency is an arm of the municipal government which taps many resources in the private sector on behalf of its patients. The Rheumatology Clinic in which patients are restored to the state of health necessary to profit from rehabilitation services is, in contrast, operated by a private university, is dependent on the financial support of the Arthritis and Rheumatism Association of Metropolitan Washington (the local chapter of the Arthritis Foundation), and is conducted in facilities and with the aid of materials and personnel provided by the municipal Health Services Administration.

## Summary

The data assembled in this study show that rehabilitation efforts provide valuable benefits for the majority of arthritis patients referred for rehabilitative services. About 1 in 4 of the group studied was returned to work with a subsequent rise in income. In every case the patient was enabled in some way to preserve or improve his economic productivity, and approximately 2 out of 3 were made more comfortable and better able to perform the activities of daily life. The nature of a successful coöperative relationship between agencies in the public and private sector, and how this relationship operates in behalf of individual patients and the public welfare in general, has been described briefly.

The authors are indebted to Mrs. Dorothy Boggess and Mr. Charles Penny of the Department of Vocational Rehabilitation for their kind coöperation and assistance in the conduct of the investigation.

# Progressive Systemic Sclerosis Simulating Idiopathic Pulmonary Fibrosis

## Report of a Case*

M. ARTHUR CHARLES, M. D.

ALTHOUGH systemic sclerosis typically involves multiple organ systems, in over 90% of the patients the presenting manifestations are vasospastic, articular or dermal.[1] Pulmonary dysfunction is seldom the first clinical manifestation. This report describes an elderly patient with rapidly progressive systemic sclerosis whose initial clinical manifestation was severe dyspnea. Despite abnormalities of esophageal motility and evidence of severe pulmonary systemic sclerosis, the patient never displayed vasospastic phenomena, articular disease, or clinical dermal changes.

### Report of Case

A 77-year-old man enjoyed good health until September, 1967, when he sustained a traumatic fracture of the third lumbar vertebra. While hospitalized for this injury his chest roentgenogram was normal and he did not complain of shortness of breath or cough. In February, 1968 he began to have dyspnea, nonproductive cough, and a generalized pressing sensation over his chest. He received symptomatic treatment for these complaints. In April, 1968 a chest roentgenogram revealed bilateral, interstitial fibrosis at the bases (figure 1). After 8 months of increasingly severe dyspnea which ultimately confined him to bed he entered Walter Reed General Hospital. He said he was most comfortable when lying flat. In addition to dyspnea he complained of difficulty swallowing solid foods, and as a result he had lost 20 pounds in the prior four months. He had not aspirated solids or liquids. There was no history of arthralgias, skin rashes, tight skin, pulmonary infection, cardiovascular disease, unusual drug and occupational exposure, or cold intolerance in the hands or feet.

His blood pressure was 120/85 and the pulse was regular at 92/minute. He was an elderly and chronically ill man who was alert and not agitated. Lying quietly his respiratory rate was 60/minute, and his chest motion was normal. Rales were audible throughout both lung fields. There was no clinical evidence of pulmonary hypertension. The extremities and skin were normal without telangiectasis, clubbing, calcinosis, or tightness.

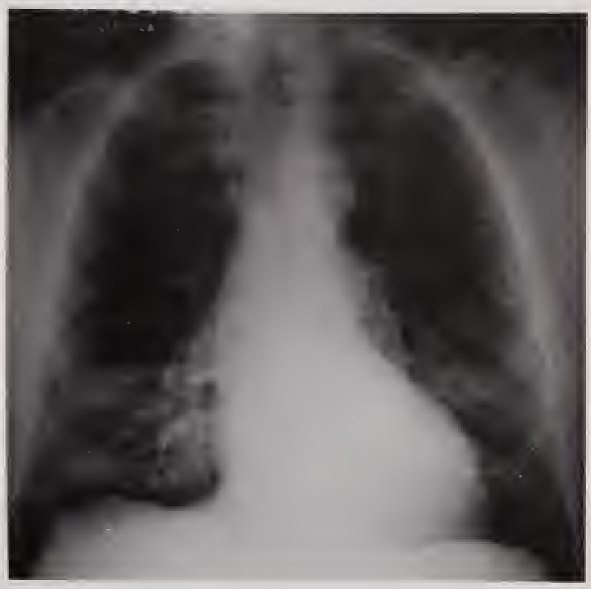


**FIG. 1. Chest roentgenogram performed April, 1968, demonstrating bilateral pulmonary fibrosis at the bases and suggestive esophageal distension.**

Laboratory data includes arterial blood gases while breathing room air: $PCO_2$, 44.5 mmg Hg; $PO_2$, 75 mm Hg; pH, 7.48. The vital capacity was 39% predicted, and the total lung capacity was 40% predicted. Further pulmonary function tests could not be performed because of the patient's extreme breathlessness. Roentgenographic examination of the chest demonstrated diffuse interstitial infiltrate with honeycombing. The pulmonary artery outflow tract was prominent (figure 2). A cine-esophagram revealed a markedly dilated irregular esophagus; peristalsis never progressed further than the region of the aortic arch (figure 3). There was an ulcer in the distal esophagus, and reflux from the stomach was seen. Studies of esophageal motility demonstrated a normal cardioesophageal sphincter, aperistalsis of the body of

---

* From the Department of Medicine, Walter Reed General Hospital Walter Reed Army Medical Center, Washington, D.C., 20012.

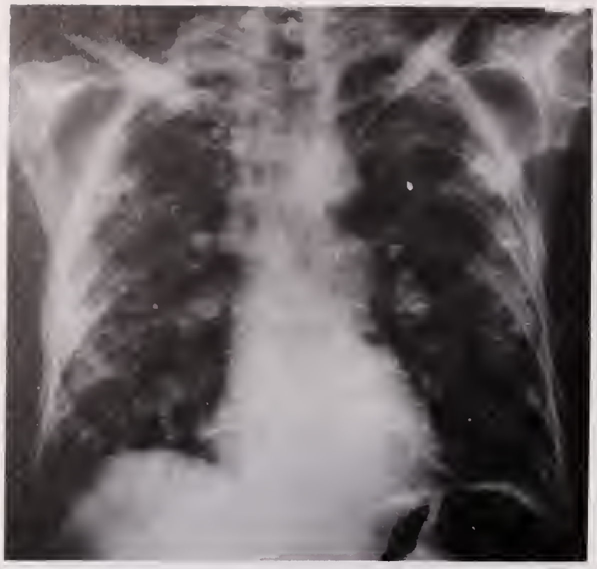


FIG. 2. Chest roentgenogram performed November, 1968, demonstrating severe, diffuse, pulmonary fibrosis and dilatation of the main pulmonary artery.

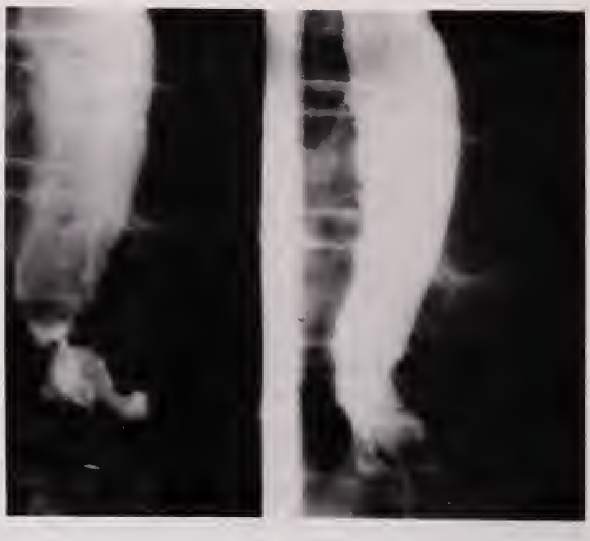


FIG. 3. Selected frames from a pathognomonic cine-esophagram demonstrating esophageal dilatation and abnormal esophageal motor activity.

the esophagus in response to deglutination, and no elevation of intraesophageal pressure after 5 mg of intramuscular Methacholine (figures 4 and 5). A latex slide test for rheumatoid factor was positive at 1:32, and an antinuclear fluorescent antibody test was strongly positive. Lupus erythematosis preparations were negative. Urinalysis and creatinine clearance were normal, and the electrocardiogram revealed left ventricular hypertrophy.

The patient's condition did not change during hospitalization, and he was discharged to the care of his personal physician. He died in December, 1968

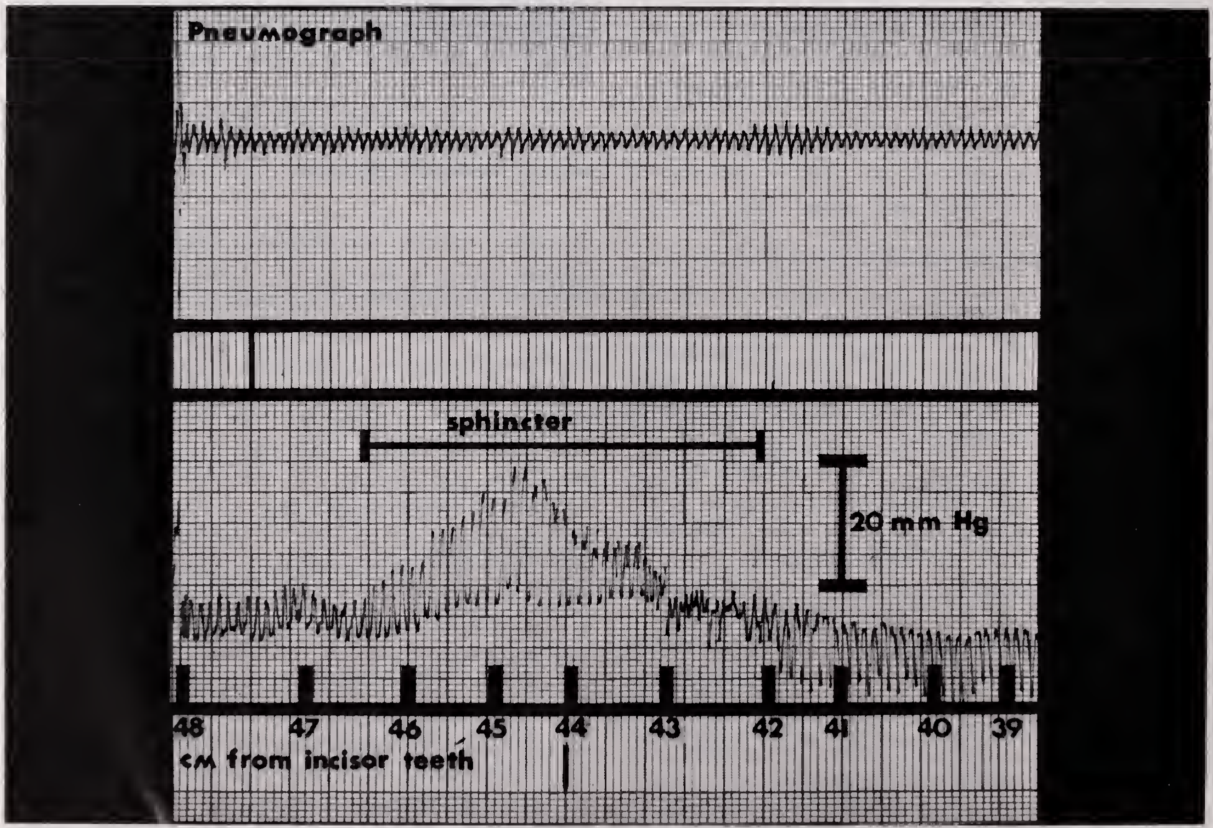


FIG. 4. Pressure measurements during slow continuous withdrawal of a water-filled, open-tipped perfused catheter through the region of the gastro-esophageal sphincter showing normal resting sphincteric pressure.

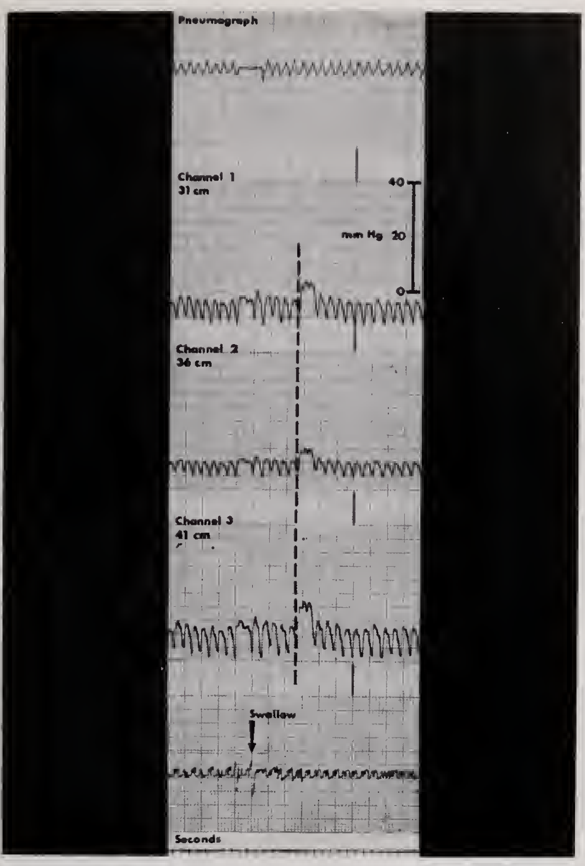


FIG. 5. Esophageal pressure recording at 31, 36 and 41 cm from the incisor teeth showing weak simultaneous (aperistaltic) contractions in response to an initiated swallow.

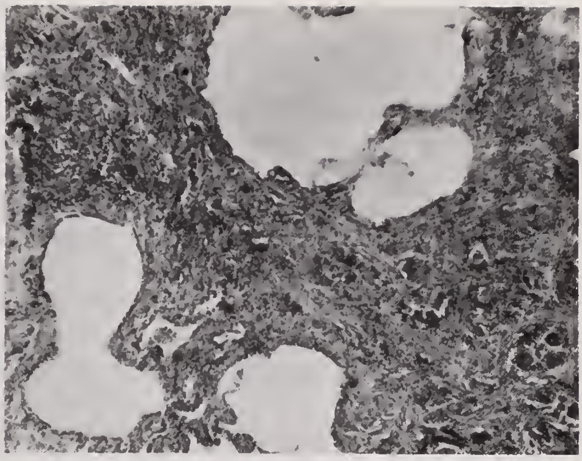


FIG. 6. Histologic section of lung parenchyma demonstrating cystic pulmonary sclerosis.

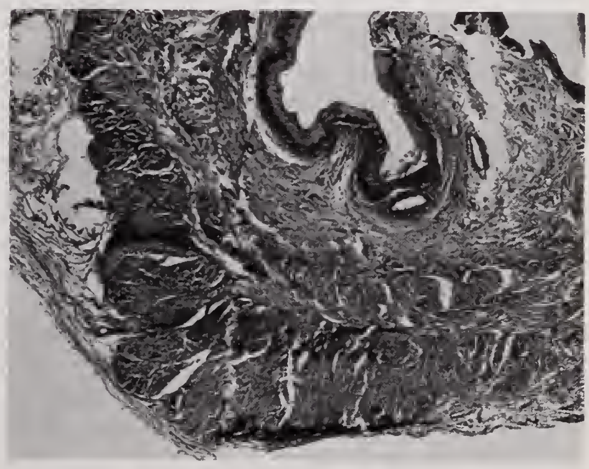


FIG. 7. Histologic section of esophagus demonstrating focal areas of fibrosis in muscularis and minimal increase in fibrosis of lamina propria.

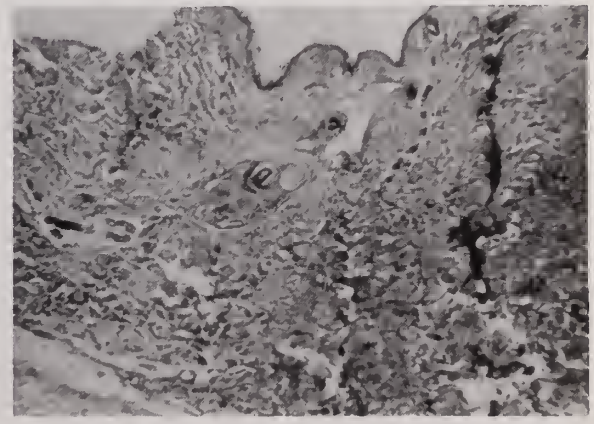


FIG. 8. Histologic section of abdominal wall skin demonstrating minimal increase in fibrosis.

following a pulmonary infection. Necropsy revealed bilateral bronchopneumonia and microscopy revealed alveoli filled with polymorphonuclear cells, edema and fibrin, making a study of underlying disease difficult; however, some areas of cystic pulmonary sclerosis (cystic bronchiolar hyperplasia) were noted (figure 6). The main pulmonary arteries appeared normal grossly, and the small arteries showed normal medial thickness. The heart weighed 350 Gm, and the right ventricle was of normal thickness. Myocardial histology was normal. Microscopically, the esophagus had focal muscle atrophy and fibrosis (figure 7). Similar, but less intense changes were seen in the small bowel. The kidneys were normal. Abdominal wall skin demonstrated increased fibrous tissue (figure 8).

## Discussion

In contrast to the usual patient with progressive systemic sclerosis in whom the diagnosis is suggested by dermal thickening and atrophy, Raynaud's phenomenon and esophageal dysfunction, this case of progressive systemic sclerosis was manifest only by extensive pulmonary fibrosis, characteristic skin and esophageal histology, and an esophageal motor abnormality.

This patient's age, presenting complaint, and fulminant course are unusual for systemic sclerosis. Systemic sclerosis begins most often during the second to fourth decades with less than 1% of the cases occurring in the eighth decade.[2] The absence of Raynaud's phenomenon or clinical skin manifestations is also unusual but has been described in 5 to 10% of the cases. In the diffuse progressive cutaneous form of scleroderma the absence of Raynaud's phenomenon and dermal changes of the hands and face are not unusual, while predominant involvement is localized to the trunk, upper arms and thighs as this patient.[3]

Generally, progressive systemic sclerosis has a protracted course with 70% of the patients having a 5-year survival, but occasional patients deteriorate rapidly with death in less than 1 year.[4] In the rapidly progressive form of systemic sclerosis, vasculitis is usually prominent, especially in the kidney.[5] In our case pulmonary involvement was rapid, but there was no evidence of vasculitis of the kidneys or lungs.

The pulmonary involvement in systemic sclerosis has been described in numerous reports.[5,6] Involvement may be in the form of parenchymal disease, pulmonary vascular disease, and recurrent aspiration due to esophageal disease. Even though not demonstrated physiologically in this patient, there is often a very weakened or absent gastro-esophageal sphincter in addition to asperistalsis of the esophageal body. This allows more ease of gastro-esophageal reflux and increases the risk of bronchopulmonary aspiration. Dyspnea is common during the course of systemic sclerosis (30-90%), but it is uncommon (5%) as a presenting manifestation.[7]

Because the patient had extensive pneumonitis terminally, histologic examination of the lung was not ideal, but cystic pulmonary sclerosis (figure 5) was present in non-necrotic areas. Clinically this patient did not have pulmonary hypertension. This was supported by normal pulmonary vascular and cardiac anatomy at autopsy. Despite these findings pulmonary hypertension cannot be excluded with certainty.[6]

Initially, this patient seemed to belong in the category of serologically positive idiopathic pulmonary fibrosis. This association is not uncommon, and various reports[8,9] have shown high incidences of rheumatoid factor and antinuclear factors in patients with unexplained pulmonary fibrosis. Serological abnormalities also occur often in progressive systemic sclerosis.[10,11] Thus serological tests can not be used to identify systemic sclerosis patients from other patients with idiopathic pulmonary fibrosis.

Prior to the dysphagia the patient appeared to have pulmonary fibrosis only. There was no evidence of a systemic disease, but the radiographic sign of esophageal distension was overlooked.

It is hoped that this report will stimulate a search for systemic sclerosis in patients diagnosed as serologically positive for idiopathic pulmonary fibrosis. Barium swallow, esophageal motility, and cutaneous, renal or esophageal histological studies may identify other patients with progressive systemic sclerosis.

## Summary

This case report describes an unusual case of progressive systemic sclerosis simulating idiopathic pulmonary fibrosis. The clinical laboratory and necropsy findings have been presented, and the relationship of serologically positive idiopathic pulmonary fibrosis and progressive systemic sclerosis have been discussed.

Acknowledgements: The author thanks Dr. Robert M. Senior for his stimulation and review of this paper, Dr. Wilson Hendry for performing the necropsy, Dr. Robert Slaughter for manometric studies of the esophagus, and Mrs. Arlene Person for secretarial assistance.

## References

1. SACKNER, M. A.: Scleroderma. New York: Grune and Stratton, 1966, p. 20.
2. SACKNER, M. A.: Ibid., p. 18.
3. SACKNER, M. A.: Ibid., p. 3.
4. SACKNER, M. A.: Ibid., p. 147.
5. D'ANGELO, W. A., ET AL: Amer. J. Med., 1969, 46, 428.
6. SACKNER, M. A.: Ann. Int. Med., 1964, 60, 611.
7. SACKNER, M. A.: Scleroderma. New York: Grune and Stratton, 1966, p. 76.
8. TOMASI, T. B., FUNDENBERG, H. H., AND FINBY, N.: Amer. J. Med., 1962, 33, 243.
9. NAGAYA, H., BUCKLEY, E., III, AND SIEKER, H.: Ann. Int. Med., 1969, 70, 1135.
10. BECK, J. S., ANDERSON, J. R., GRAY, K. G., AND FOWELL, N. R.: Lancet, 1963, 2, 1188.
11. HOLLANDER, J. L.: Arthritis and Allied Conditions. Philadelphia: Lea and Febiger, 1966, p. 95.

# A Case of Pre-eclampsia with Bell's Palsy and Concomitant Fetal Anomalies

AARON H. GERBER, M.D., F.A.C.O.G., F.A.C.S.*
MONICA J. COLLINS, M.D., F.R.C.P.†

BELL'S PALSY is a rare complication of pregnancy. Pope and Kenan[1] found only 17 cases associated with pregnancy, or the puerperium, reported in the world literature. Thus, even if this were not a true index of its incidence, one would still have to regard this condition a rare manifestation. These authors added 7 cases, of which 5 were obtained from a review of cases on record at the Duke Medical Center. The largest series was reported by Edwards[2] who described 9 cases.

Bell's palsy is defined[3] as a "peripheral facial paralysis due to a lesion of the facial nerve and resulting in characteristic distortion of the face". Kunkle[4] restricts this designation to those paralyses which occur "as an isolated finding without demonstrable cause".

The case under consideration, in addition to demonstrating most of the symptom-complex considered characteristic of Bell's palsy,[5] was unique in that it occurred in a pediatric primigravida suffering from severe preeclampsia.

## Report of Case

A 14-year-old primigravida was first seen at 34-35 weeks gestation. Her blood pressure was 160/100. The uterus corresponded to the period of amenorrhea and contained a single fetus presenting a breech. The fetal heart tones were normal. There was no dependent edema. The weight had increased excessively and was 159 lbs. The remainder of the physical examination was not contributary. Urinalysis of a mid-stream specimen contained 15-30 wbc/hpf, and subsequent report of culture was positive for *B-proteus.* All other laboratory findings were reported as being within acceptable range.

There was a record of the patient having been examined 1 year previously at this Clinic. At that time the blood pressure was 120/80, and no unusual physical findings were noted.

During the present illness the patient failed to improve on ambulatory treatment with sedation, furosemide, and curtailment of sodium intake, and was hospitalized. The blood pressure at this time fluctuated between 150-170 systolic and 100-120 diastolic. A 2-plus pretibial edema was present, and the urine showed 3-plus protein uria. The pregnancy was estimated at 35 weeks duration. A single fetus was presenting by an unengaged breech. The fetal heart tones were readily heard at the level of the umbilicus and were normal in all respects. The cervix was long, and the os was closed. X-ray pelvimetry disclosed an adequate pelvis with no fetopelvic disproportion.

The patient responded well to treatment and the blood pressure stabilized at 130/90. She was discharged improved, undelivered, for ambulatory prenatal follow-up in the "high risk" clinic.

Ten days following discharge from the hospital she was readmitted because of a secondary rise in blood pressure to 150/110, dependent edema, and 4-plus proteinuria. On the morning of the day of admission the patient experienced a pain in the left side of the face behind the angle of the jaw. On the 3rd day following admission a fully developed facial palsy was noted. There was facial asymmetry (figure 1) and flattening of the labial fold on the left. The left angle of the mouth was immoble, while the right was pulled up; this was evident at rest as well as on laughing or grimacing. The patient could neither puff out the left cheek nor whistle. The left eye could not be closed. There was no interference with taste or lacrimation. Speech was somewhat muffled. No hyperacusia was present. Over the next 3 days there was an intensification of the facial palsy. Some swelling appeared at the angle of the left mandible. There was no involvement of the parotid gland and no lymphadenopathy. At this time the temperature was normal. The blood pressure ranged between 130-160 systolic and 90-110 diastolic. The pertinent laboratory findings were: Hb. 13.7, hematocrit 40, wbc 3,900 with 68% lymphocytes, 24-hours urinary protein 761 mg, and blood uric acid 9.0.

After several days of treatment the facial pain appeared to be subsiding and the toxemic process somewhat stabilized. However, soon thereafter the patient began to complain of epigastric pains and

---

*Assistant Professor, Department of Obstetrics and Gynecology and Department of Community Health and Social Planning, Tufts University School of Medicine, Boston, Massachusetts 02155; Obstetrician-Gynecologist, Tufts Delta Health Center, Mound Bayou, Mississippi.

†Assistant Professor, Department of Community Health and Social Planning, Tufts University School of Medicine; Pediatrician, Tufts Delta Health Center.

Requests for reprints should be addressed to Dr. Aaron H. Gerber, 2915 Connecticut Ave., N.W., Washington, D.C. 20008.

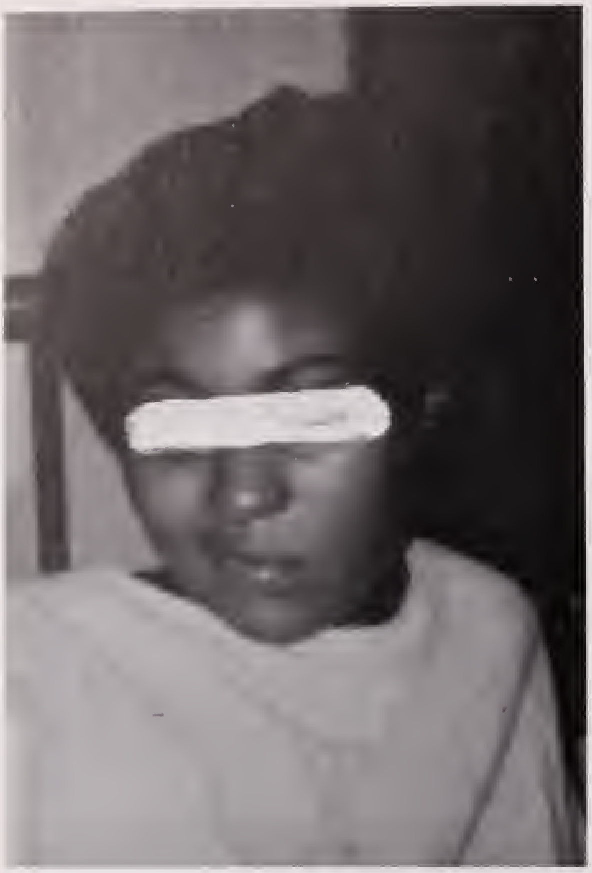


**FIG. 1. Paralysis of left facial nerve on 4th day following onset.**

developed nosebleeds. An active regimen of parenteral magnesium sulphate was instituted, and labor was induced artifically by means of oxytocin, administered in the form of a dilute intravenous drip. Following a satisfactory labor the patient was delivered of a living baby, presenting as a breech, with assistance to the after-coming head. A description of the baby follows.

The baby revealed ambiguous genitalia. There was marked clitoral enlargement and fusion of the labia or underdevelopment of the scrotum. Gonads were not palpable. The head was somewhat enlarged with widely split sutures. A ventriculogram showed a dilatation of both lateral ventricles and cavum septum pellucidem. The baby also had polydactylism on the left hand and foot.

The subsequent information was obtained through consultation with the Department of Pediatrics of the University of Tennessee School of Medicine.

"Cytogenic study established the presence of a male chromosomal pattern. Abdominal exploration confirmed the gonads to be testes. Bilateral orchiectomy and herniorraphy were performed. A vaginal construction is planned for a later date."

Examination of the mother at 5 weeks postpartum revealed a residual palsy of the left facial nerve. The blood pressure ranged from 140/90 to 150/100. The heart sounds were normal, and there was no bruit over the renal vessels. The patient was last seen at 9 weeks postpartum. At this time the Bell's palsy appeared to have completely disappeared (figure 2).

## Discussion

Pope and Kenan[1] noted that 9 of the 20 cases of Bell's palsy in pregnancy which they reviewed "showed some evidence of toxemia, ranging from mild to quite severe". It would appear that there probably is a significant correlation between the 2 conditions.

While complete spontaneous recovery occurred in this case, some are of the opinion that surgical decompression should be considered in cases in which electrical testing suggests a poor prognosis. Regrettably, the total documented experience is, at best, limited. Hopefully, the addition of further reports will provide a basis for prognosis and treatment.

Was the occurrence of multiple anomalies in the fetus purely coincidental? Pope and Kenan make no mention of fetal anomalies in the cases reviewed by the. Cayler[6] reported congenital heart disease and unilateral facial palsy in 14 infants. Toxemia,

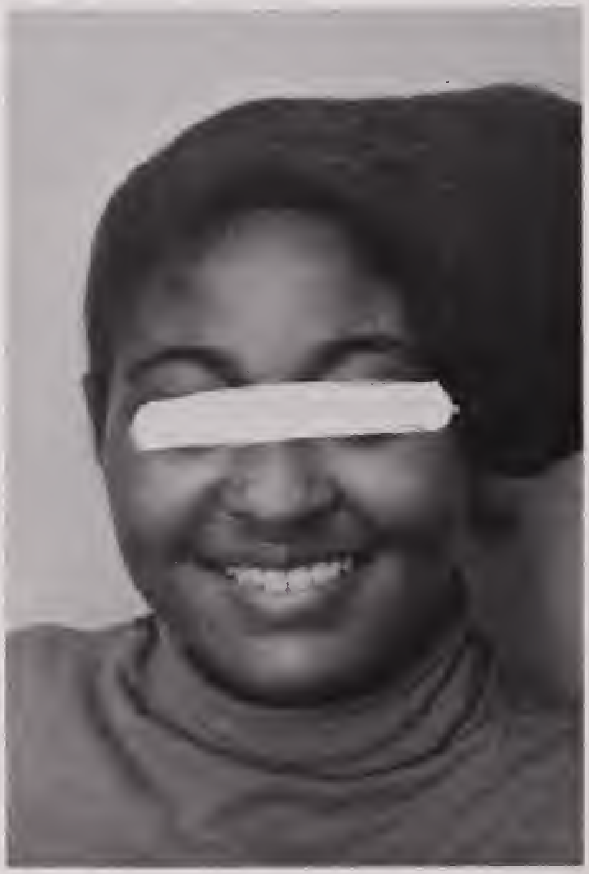


**FIG. 2. Nine weeks postpartum—complete recovery of facial paralysis.**

infection, and palsy do not appear as complicating maternal factors in his series. However, he suspected a probable viral first-tirmester infection which was "subclinical" for the mother. Wilson[7] stated that a teratogenic agent "need not be deleterious to the maternal organism" and subclinical cases of rubella . . . may cause congenital malformations".

## Summary

A case of Bell's palsy in the mother with pre-eclampsia and concomitant fetal anomalies has been presented. Since only 24 cases in pregnancy have been reported it must be considered a rare complication. About half the cases occurred in the presence of pre-eclampsia. The significance of the concomitant fetal anomalies remain unclear.

## References

1. POPE, T. H., JR., AND KENAN, P: Bell's Palsy in Pregnancy. Arch. Otolaryng., 1969, 89, 830.
2. EDWARDS, C. E.: Bell's Palsy in the Last Trimester of Pregnancy and the Puerperium. Amer. J. Obstet. Gynec., 1964, May, 274.
3. DORLAND'S ILLUSTRATED Medical Dictionary, 24th edition. Philadelphia: W. B. Saunders Co., p. 1085.
4. KUNKLE, E. C.: Bell's Palsy, Cecil-Loeb Textbook of Medicine. Edited by Beeson, P. B., and McDermott, W. Philadelphia: W. B. Saunders Co., 1963, p. 1633.
5. GERBER, C. T., BEPKO, F. J., GERBER, A. H., AND COHEN, D.: Congenital Facial Nerve Paralysis in the Newborn. Medical Annals of the District of Columbia, 1969, 38, 663.
6. CAYLER, G. G.: Cardiofacial Syndrome. Arch. Dis. Child., 1969, 44, 69.
7. WILSON, J. G.: Experimental Studies on Congenital Malformation. J. Chronic Dis., 1959, 10, 111. Cited by Eastman-Hellman, Williams Obstetrics 13th edition. New York: Appleton-Century-Crofts.

# Clinicopathologic Conference: Jaundice and Abdominal Pain in a 65-Year-Old White Woman

CHANDLER SMITH, M.D.*

THE FOLLOWING CASE REPORT was presented for discussion at the biweekly Clinicopathologic Conference held at George Washington University Hospital, March 17, 1970.

The patient was a white woman 65 years old who was admitted to the hospital because of jaundice and pain in the abdomen. She had been well until 2 years previously when persistent fatigue was first noted. About 4 months before admission abdominal pain began and gradually increased in severity. It was steady and diffuse and was accompanied by a vague feeling of epigastric discomfort. Both were relieved by eructation. Anorexia had also been present for the past 3 months, and her weight had decreased from 130 to 100 pounds. Three weeks before admission the pain localized in the right upper quadrant of the abdomen and occasionally radiated to the chest and back. Dark urine was first observed 4 weeks before entering the hospital, and 1 week later her friends pointed out a yellow discoloration of her skin. She described no unusual dietary habits except a regular avoidance of fatty foods. There had been no cough, shortness of breath, chest pain, hemoptysis, hematemesis, or change of bowel habit. She had smoked 1 pack of cigarettes daily for the past 40 years. She did not drink alcohol excessively.

She was thin, and the skin was pale yellow. The temperature was 98.6°F., the pulse rate 92, the respiratory rate 20, and the blood pressure 110/70 mm Hg. A loss of subcutaneous tissue was evident, and the palms were erythematous. No stellate telangiectases of the skin were seen. The sclerae were yellow. The lungs were normal. The heart was slightly enlarged, the rate was regular, and no murmurs were heard. The abdomen was flat and soft. The liver edge was palpated 4 cm below the right costal margin, and the surface was smooth and the texture soft. Bowel sounds were normal.

The urine was normal except for the positive test for bile and 15 to 20 leukocytes per high power field of sediment. The hemoglobin was 10.2 Gm and the hematocrit 34, and the leukocytes numbered 9,050 with 62 segmented granulocytes, 31 lymphocytes, 4 eosinophiles, 2 monocytes, and 1 basophile. A serologic test for syphilis was nonreactive.

Total serum protein was 7.4 Gm with 4.2 Gm albumin and 3.2 Gm globulin. Serum bilirubin was 15.9 mg with 10.2 mg direct reacting; urine urobilinogen was negative. Serum calcium and phosphorus were 8.3 and 2.5 mg respectively. Serum amylase, glutamic transaminase, lactic dehydrogenase, and blood amylase were normal. A trace of occult blood was found in the stool. Serum alkaline phosphatase was 14.5 units (normal 2-4.5). Proctoscope examination to 16 cm was not remarkable. A chest X-ray film revealed emphysema and a calcified granuloma in the left upper lobe. A radiograph of the adbomen disclosed slight scoliosis of the spine and calcified blood vessels in the pelvis. An intravenous pyelogram revealed no abnormality. The gallbladder failed to concentrate on injected radio-opaque dye. Upper gastro-intestinal X-ray examination revealed retention of barium in the stomach and medial displacement of the second portion of the duodenum. The latter was attributed to enlargement of the liver. Barium studies of the colon disclosed only diverticula.

The patient's weakness was progressive, bowel sounds remained active, and the abdomen was soft except for moderate tenderness over the liver. On the 8th hospital day a needle biopsy of the liver revealed bile stasis. On the 12th hospital day peritoneoscopy disclosed enlargement of the liver and dilatation of the gallbladder. A small tissue alteration was found on the left lobe of the liver and a biopsy disclosed only fatty metamorphosis. The urine remained negative for urobilinogen. On the 18th hospital day an operation was performed.

## Clinical Discussion

Dr. Piemme†: The patient presents a straight forward clinical problem: The analysis of cholestatic jaundice. Other diseases causing jaundice may be dispensed with at the outset. The consistent absence of urobilinogen in the urine necessitates the total obstruction of bile so that none reaches the intestine. Certain observations that are characteristic of cholestatic jaundice are missing; pruritus for example, is common; hyperlipemia often with subcutaneous xanthomas are frequently present; and a foul bulky stool from the lack of lipolytic enzymes is usual. None of these is described, possibly because no one recorded the observation.

---

* Professor of Pathology, The George Washington University School of Medicine, 1335 H Street, N. W., Washington, D. C. 20005.

† Dr. Thomas E. Piemme, Professor of Medicine.

The causes of cholestatic jaundice may affect the biliary apparatus within the liver or affect the bile ducts outside the liver. The former set may involve the hepatocytes, the bile canalicules, or the larger bile radicals. The later set of entities involve the biliary duct system beyond the liver and include the duodenum. Intrahepatic cholestasis can be eliminated at the outset because of 3 observations we are given in the protocol:

1. Peritoneoscopy revealed a smooth hepatic surface, which excludes cirrhosis.
2. Biopsy revealed that bile stasis was present.
3. The gallbladder was dilated requiring obstruction distal to the junction of the cystic and common bile ducts.

Therefore, we are clearly left with a discussion of extrahepatic biliary obstruction.

The record gives other information that bears on the cause of this obstruction. The patient is 65 years old so that biliary atresia or other congenital anomalies are excluded. Fatigue and abdominal pain do not help much in the differential diagnosis. The anorexia and weight loss of 30 pounds are also of limited differential use; they occur with more than 1 cause of this syndrome. The palmar erythema indicates a failure of estrogen metabolism but not cirrhosis. Anemia is unusual with uncomplicated obstructive biliary disease. It may be due to fever, hemolysis, blood loss, or neoplasm. I presume for the values given that it is of hypochromic microcytic type. It would have been most helpful in certifying this judgment if we had been provided with a description of the red cells. Since occult blood was present in the stool on at least 1 occasion I attribute the anemia to persistent blood loss. No case of this kind should fail to have repeated examination of the stool, especially for blood. In addition, a description of the stools which I presume were colorless, should have been carefully reported.

Dr. Ackerman*: Films of the abdomen reveal medial displacement of the descending loop of the duodenum. We were able to demonstrate by the use of recumbent films that this displacement is not due to pressure from behind the duodenum. Having established that, we attribute this finding to pressure from the enlarged gallbladder.

Dr. Piemme: I think all of the information is now in, and it will be possible to assemble the main points and consider the most probable of the possible diagnoses. In doing this I want to digress for a moment and consider how a diagnosis is ordinarily made. Let me use an example. If you should ask an engineer, a physicist, and a physician how tall a given building is, each would likely make his estimate in a different way. The engineer would triangulate and the physicist would measure barometric pressures and each would calculate the height. Both would provide respectable estimates. The physician however, would likely say, "In my experience a building of that appearance is 200 feet tall." Experience is an uneven guide. It is colored by one's most recent encounters. Although necessary to clinical diagnosis, reliance solely on one's own experience is hazardous. Entities that need to be considered are often so uncommon as to preclude sufficient personal experience. More accurate appraisal of a clinical setting may be gained through a knowledge of the probability of the occurrence of a particular symptom in a disease set, and the probability of the occurrence of each candidate disease with respect to the other alternatives. Such an approach has been defined for congenital heart disease by Warner.[1] I would propose that we use such an approach in this patient.

The candidate diseases in our patient include sclerosing cholangitis, benign tumor of the common duct, common-duct stone, carcinoma of the pancreas, and carcinoma of the ampulla of Vater. Key independent diagnostic points that would allow a separation of these are weight loss, anemia, absence of urobilinogen in the urine, and dilatation of the gallbladder. The figures are drawn from the literature with heavy reliance on Sherlock.[2] Provided that signs are independent of one another, one may apply the probability equation of Bayes and LaPlace in order to calculate the probability of each disease in this patient. In doing so, one determines that the probability is 0.65 that the patient has carcinoma of the ampulla of Vater, or common bile duct, and 0.34 that the patient has carcinoma of the head of the pancreas. The other alternatives turn out to be too improbable for serious consideration. Believing that there is some objective merit to this approach and observing that it fits with my intuitive expectation anyway, I shall conclude that the patient has primary biliary tract carcimoma.

Dr. Rosenbaum†: You have attached much importance to the trace of occult blood in the stool. Do you really think this is the cause of the anemia?

Dr. Piemme: We are not given enough information to be sure, but the hemoglobin and hemotocrit values suggest that the anemia is hypochromic microcytic, and the presence of blood in the stool is consistent with this. I have thus chosen to assume that persistent bleeding in the bowel is the cause of the anemia.

---

*Dr. Robert Ackerman, Resident in Radiology.

† Dr. Arthur Rosenbaum, Clinical Professor of Medicine and Moderator of the Conference.

I might add that this is an exceedingly vital assumtion. If one leaves out the fact that there is blood free in the gastrointestinal tract, the probability is overwhelming that the patient has carcinoma of the pancreas. Repeated stool examinations are really mandatory in this circumstance.

Student: Would you comment on the significance of the dilated gallbladder?

Dr. Piemme: What I said was that the gallbladder would not be dilated if the obstruction were above the junction of the cystic and common bile ducts, and that it would not be dilated if the gallbladder were inflamed. The dilatation therefore indicates the site of the obstruction and something about the nature of the process.

### Clinical Diagnosis

Dr. Piemme: Carcinoma of the common bile-duct.

### Pathology Discussion

### (Autopsy No. 6115)

Dr. Smith: At operation the peritoneum contained 1000 ml of bile-stained clear ascitic fluid. A region of induration was palpated adjacent to the head of the pancreas. In addition, lymph nodes in these regions were firm. A lymph node was excised and frozen section examination revealed metastatic adenocarcinoma. It was presumed that this arose in the pancreas and that cure could not be achieved surgically because of the spread of the tumor. Hence, the gallbladder was anastamosed to the jejunum and a gastrojejunostomy was performed. On the third postoperative day oliguria developed, and 2 days later the patient died.

Autopsy revealed a carcinoma of the head of the pancreas that compressed and obstructed the common bile duct (figure 1). The pancreatic duct was also obstructed and the body and tail of the pancreas were firm, atrophic, fibrosed, and chronically inflamed. Histologic examination revealed a well differentiated adenocarcinoma (figure 2). No metastases were found except in the lymph nodes about the head of the pancreas. The liver revealed pronounced bile stasis. The heart unexpectedly disclosed a recent infarct of the anterior wall of the left ventricle and a recent thrombus in the right coronary artery. An incidental finding was a small saccular aneurysm of the abdominal aorta between the renal ostia and the iliac bifurcation.

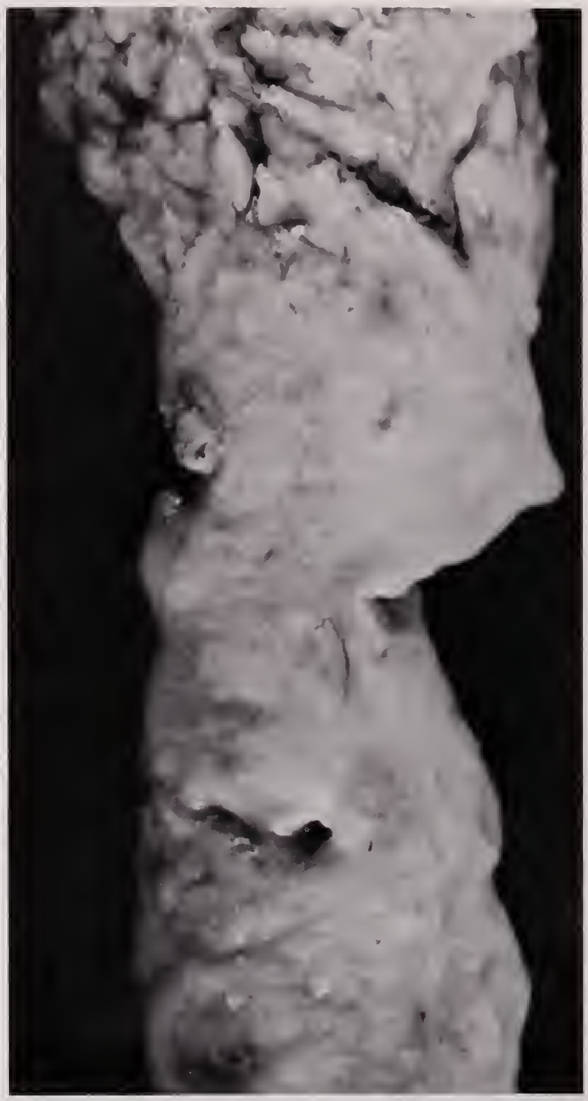


**FIG. 1. The Cut surface of pancreas showing uninvolved tissue (top), carcinoma (middle), and atrophic tissue (bottom).**

### Anatomic Diagnoses

Carcinoma of head of pancreas.
Bile stasis of liver.
Recent infarct of myocardium.
Recent thrombus of coronary artery.

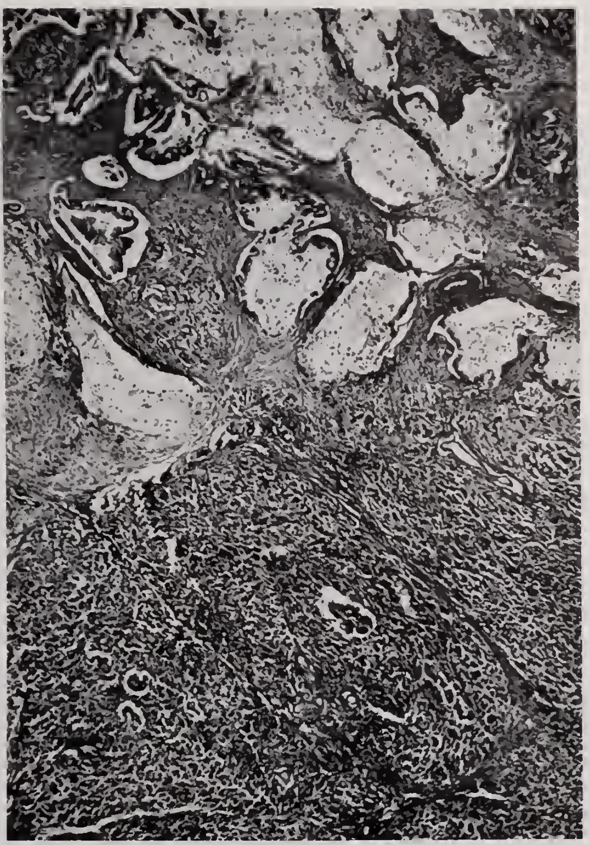


**FIG. 2. Histologic section showing adenocarcinoma (top) and atrophy and fibrosis (bottom).**

## References

1. WARNER, H. R.: A Mathematical Approach to Medical Diagnoses. J. A. M. A., 1961, 177, 177.
2. SHERLOCK, S.: Diseases of the Liver and Biliary System, 4th Edition. Philadelphia: F. A. Davis Company, 1968, p. 744.

# President's Page

## THE METHADONE QUESTION . . .

Some positive steps have to be taken. Whether we like it or not, the use of drugs is spreading like wildfire among the teenagers throughout the city and into the suburbs. Although the exact number of heroin addicts in our community is not known, the estimated number is of alarming proportion. Drugs have found their way into junior high schools as well as elementary schools.

Our Drug Committee, under the leadership of Dr. Donald Glew, has concluded that aggressive steps must be taken immediately to deal with this problem. We recognize the well-meaning intentions of many physicians who are treating one, two, or maybe even half a dozen addicts with methadone for either detoxification purposes or maintenance therapy. The hazards to both the physician and the patient are too great to justify a continuation of these treatment methods. The number of instances where addicts are using more than one source for their methadone supply is legion. There are many reports of weekly methadone supplies being placed on the black market for rather large sums of money, the proceeds then going for the purchase of heroin. Some take their methadone supply in private, convert it into an injectable form, which then produces a high not unlike that of heroin. The uses and abuses of methadone are well documented. The indiscriminate use of this medication must end. It is vital that every private physician desist from any treatment program unless they can fulfill all of the criteria set down by the Medical Society and the Narcotics Treatment Administration. The first step for physicians in meeting this criteria is to register all patients being treated with methadone at the Central Registry.

We wish both to encourage the medical schools to participate in out-patient treatment programs, and to encourage more doctors to involve themselves in this treatment area. We also hope that the suburban communities will be encouraged to start programs of their own. Our ultimate hope is that all of the needy in the metropolitan area are given the proper care.

Marvin C. Korengold

## CALORIES / 7 oz. Serving*

| | | | |
|---|---|---|---|
| Beef Broth | 22 | Vegetable | 68 |
| Consommé | 29 | Tomato | 69 |
| Chicken with Rice | 43 | Cream of Asparagus | 70 |
| Chicken Gumbo | 48 | Cream of Chicken | 76 |
| Chicken Noodle | 54 | Cream of Mushroom | 115 |
| Cream of Potato | 58 | Green Pea | 116 |
| Chicken Vegetable | 60 | Cream of Shrimp (Frozen) | 132 |
| Vegetable Beef | 66 | Bean with Bacon | 133 |

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

# There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

An excerpt
from No. 1
of a new series
from Searle*

# "The Ecology of Birth Control"

## 75 million more Americans—what impact on health care?

Because of a declining birthrate in the United States—attributable in no small measure to the widespread use of contraceptives—our population in thirty years is expected to be *only* 280 million, while the world population is expected to double, reaching 7 billion.

But the word "only" has an ironic ring to ecologists who warn of cities resembling overcrowded, contaminated rat colonies, of respiratory and mental diseases reaching epidemic proportions and of a health-care community virtually overwhelmed by the burden.

The global consequences may be no less devastating. Ecologists estimate that every American has roughly fifty times the negative impact on the Earth's life-support systems of, say, a citizen of India. In these terms, adding 75 million Americans would be equivalent to adding 3.7 billion Indians to the world population.

**For the complete brochure, ar*
*others in the series as they appea*
*please write to Searle or ask your Sear*
*representative.* Explored in the fort
coming issues will be the role of bir
control on family pressures and i
effects on the family; the influences
poverty, ethnic factors and marit
status; its role in illness, its genet
implications and its effects on tl
emotional and behavioral life of tl
individual.

## An original contribution to the science of contraception

# Demulen®

Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

Demulen...for low estrogen and Searle's progestin...with ts unsurpassed contraceptive effectiveness and low incidence of side effects...with simple "Sunday-starting" and patient-proof Compack® tablet dispenser.

**Actions** — Demulen acts to prevent ovulation by inhibiting the output of goadotropins from the pituitary gland. Demulen depresses the output of both he follicle-stimulating hormone (FHS) and the luteinizing hormone (LH).

**Special note:** Oral contraceptives have been marketed in the United States ince 1960. Reported pregnancy rates vary from product to product. The efectiveness of the sequential products appears to be somewhat lower than that f the combination products. Both types provide almost completely effective ontraception.

An increased risk of thromboembolic disease associated with the use of ormonal contraceptives has now been shown in studies conducted in both reat Britain and the United States. Other risks, such as those of elevated lood pressure, liver disease and reduced tolerance to carbohydrates, have ot been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subrimate animal species in multiples of the human dose increases the frequency f some animal carcinomas. These data cannot be transposed directly to man. he possible carcinogenicity due to the estrogens can be neither affirmed nor efuted at this time. Close clinical surveillance of all women taking oral conaceptives must be continued.

**Indication** — Demulen is indicated for oral contraception.

**Contraindications** — Patients with thrombophlebitis, thromboembolic disorers, cerebral apoplexy or a past history of these conditions, markedly imaired liver function, known or suspected carcinoma of the breast, known or uspected estrogen-dependent neoplasia and undiagnosed abnormal genital eeding.

**Warnings** — The physician should be alert to the earliest manifestations of rombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary nbolism and retinal thrombosis). Should any of these occur or be suspected e drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain nd studies of morbidity in the United States have shown a statistically sigficant association between thrombophlebitis, pulmonary embolism, and erebral thrombosis and embolism and the use of oral contraceptives. There ave been three principal studies in Britain [1-3] leading to this conclusion, and ne[4] in this country. The estimate of the relative risk of thromboembolism in e study by Vessey and Doll[3] was about sevenfold, while Sartwell and assoates[4] in the United States found a relative risk of 4.4, meaning that the users e several times as likely to undergo thromboembolic disease without evident ause as nonusers. The American study also indicated that the risk did not ersist after discontinuation of administration, and that it was not enhanced long-continued administration. The American study was not designed to aluate a difference between products. However, the study suggested that ere might be an increased risk of thromboembolic disease in users of seuential products. This risk cannot be quantitated, and further studies to conm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or omplete loss of vision, or if there is a sudden onset of proptosis, diplopia or igraine. If examination reveals papilledema or retinal vascular lesions meditation should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is commended that for any patient who has missed two consecutive periods egnancy should be ruled out before continuing the contraceptive regimen. the patient has not adhered to the prescribed schedule the possibility of egnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been entified in the milk of mothers receiving these drugs. The long-range effect the nursing infant cannot be determined at this time.

**Precautions** — The pretreatment and periodic physical examinations should clude special reference to the breasts and pelvic organs, including Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives** — A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

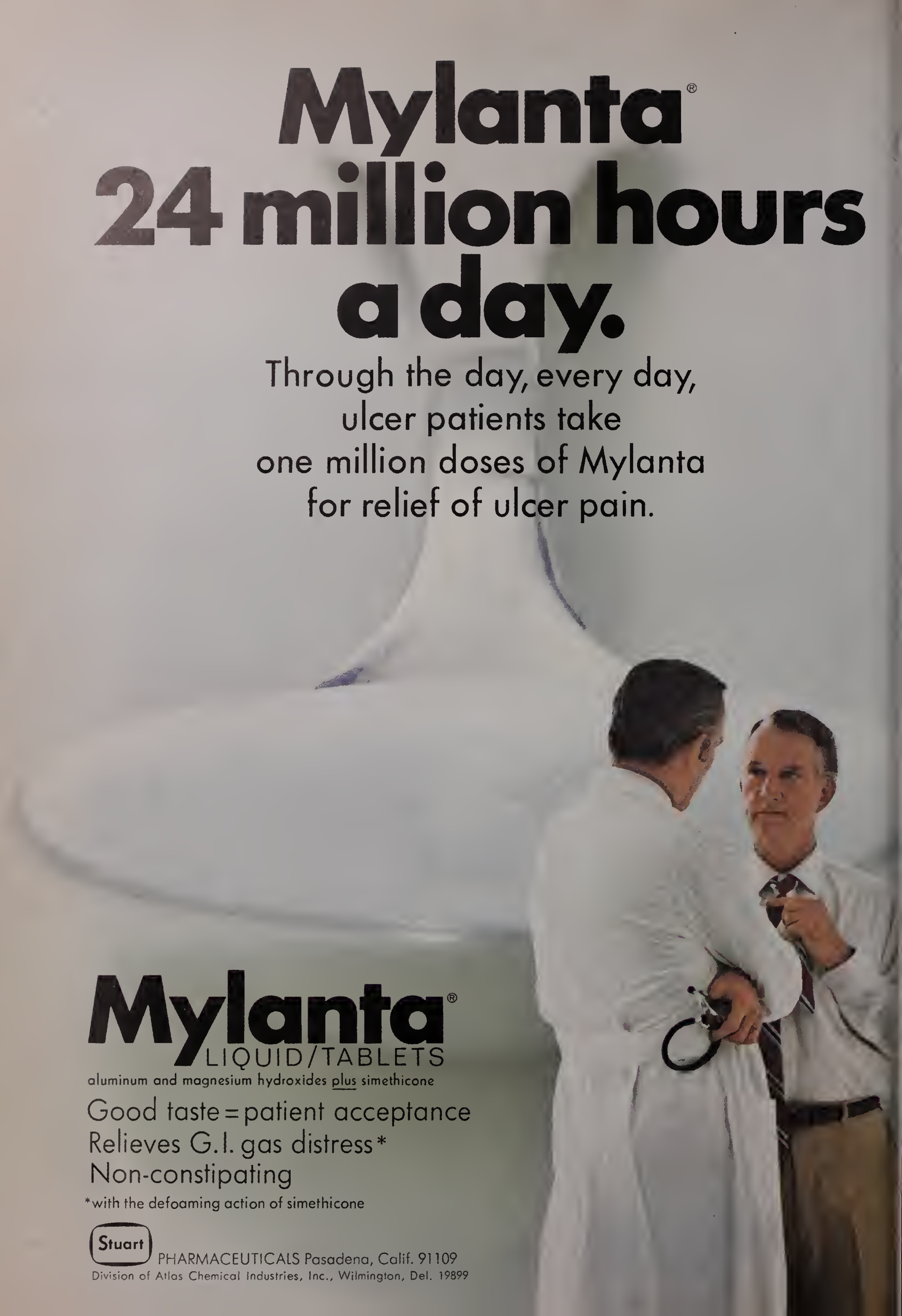
Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted; anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in $T^3$ uptake values; metyrapone test and pregnanediol determination.

**References: 1.** Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. **3**. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. **4**. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. 90:365-380 (Nov.) 1969.

1A2

SEARLE
Where "The Pill" Began
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680



# Mylanta®
# 24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

**Mylanta®**
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart
PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

A
BUILDING BLOCK
TO RECOVERY

"Welcome back, Ann"
A djunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs
One tablet q.i.d.
Trypsin 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma
One tablet q.i.d.

**Indications:** When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
**Contraindications:** ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
**Precautions:** It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
**Adverse Reactions:** Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
**Dosage:** One tablet q.i.d.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK- BITABS U.S. PATENT NO. 3,004,893 9/70 0-009A 161

# Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

# The causes of vaginitis are multiple

**Trichomonads . . . monilia . . . bacteria**

You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

**AVC**

**Cream** (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

**Suppositories** (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

**Contraindications:** Known sensitivity to sulfonamides.

**Precautions/Adverse Reactions:** The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.

**Dosage:** One applicatorful or one suppository intravaginally once or twice daily.

**Supplied:** Cream – Four-ounce tube with or without applicator. Suppositories – Box of 12 with applicator.

TRADEMARK: AVC AV-104 2/71 Y-149

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

# AVC
# The treatment is singular

# History of the Medical Society of the District of Columbia

## CHAPTER XI

### More About the Home Front

#### Civilian Defense

NO ACCOUNT OF WORLD WAR II in Washington would be complete without recounting the story of Civilian Defense in the District of Columbia. It was marked by good intentions, political maneuvering, naïveté, and frustrations. In the beginning the Civilian Defense had been under the auspices of the medical profession. The proposals that were practical received a discouraging reception.

Fiorello LaGuardia, the roly-poly irrepressible former Congressman and later Mayor of New York, was the first United States Director of Civilian Defense. In a statement made following his appointment he directed attention to an official bulletin issued in England in 1938 which read: "The need for safeguarding the civilian population is not related to any belief that war is imminent. It arises from the fact that the risk from attack from the air, however remote it may be, is a risk that cannot be ignored and because preparations to minimize the consequences of attack from the air cannot be improvised on the spur of the moment but must be made, to be effective, in times of peace."

LaGuardia's comments were: "Whether or not we regard danger to the lives and property of our people as imminent I would urge that immediate steps be taken to carry out these recommendations of the Office of Civilian Defense in every State along our seaboard and in industrial areas in the interior."

Medical Societies and hospitals throughout the land were called upon to cooperate by organizing Emergency Medical Services for Civilian Defense. Bulletin number 1, issued by Dr. George Baehr, Chief Medical Officer of the Office of Civil Defense, set forth a detailed table of organization.

In the District of Columbia Dr. John A. Reed was appointed Chief of the Emergency Medical Service for the District by J. Russel Young, President of the Board of Commissioners for the District of Columbia. Dr. Reed was informed that his responsibility was "to make an inventory of the Community's medical resources and facilities and to prepare local plans, develop an organization, and provide for training personnel to carry out the functioning of the Emergency Medical Service . . . ."

Dr. Reed promptly appointed the following:

Dr. Oscar B. Hunter, Assistant Chief and Medical Officer in Charge of Personnel
Dr. W. Ross Morris, Assistant Chief and Medical Officer in Charge of Casualty Stations
Dr. William Earl Clark, Assistant Chief and Medical Officer in Charge of Voluntary Agencies
Dr. Philip O. Pelland, Assistant Chief and Medical Officer in Charge of Transportation
Mr O. K. Fike, Assistant Chief and Medical Officer in Charge of Hospital Mobilization
Dr. Paul F. Dickens, Assistant Chief and Medical Officer in Charge of Governmental Agencies
Dr. James A. O'Keefe, Assistant Chief and Medical Officer, Organization Assistant

Dr. Philip T. Johnson, of the Medico-Chirurgical Society of Washington, Assistant Chief and Medical Officer, Organization Assistant

Dr. William B. King, Assistant Chief and Medical Officer, Organization Assistant in Charge of Metropolitan Virginia

Dr. Read N. Calvert, Assistant Chief and Medical Officer, Organization Assistant in Charge of Metropolitan Maryland

Mr. Theodore Wiprud, Special Assistant and Liaison Officer with the Medical Society

An efficient and sometimes blunt organizer, Dr. Reed told his associates what was expected of them and added, "A military attack on Washington is believed by many to be in the world of fantasy, and the thought that the Nation's Capital may be a London or Coventry of the Western Hemisphere is decidely improbable, but I am sure we all agree that to let it rest at that would be folly." A Medical Advisory Committee headed by Dr. George C. Ruhland, Health Officer of the District of Columbia, was appointed.

Police passes and auto stickers were issued to physicians in the event of an air raid.

Plans were soon perfected to cope with any emergency which might arise. The Washington Central Labor Council donated $15,000 for the purpose of preparing 2,000 units of blood plasma to be used in the event of enemy action. Dr. Reed appointed Dr. Roger M. Choisser Assistant Chief Medical Officer in charge of the plasma bank. Five hospitals were designated bleeding centers, with their pathologists in charge.

Scientific meetings were still being held at night in the Medical Society's building under wartime conditions. A blackout was enforced by Civilian Defense Wardens in the area. Heavy curtains for the high windows concealing the light from within had been purchased for the first and second stories of the building. Also the outside and inside entry door were curtained so that the light inside could not be seen when anyone entered or left the building. Skylights had been painted black, and the heavy canvas curtain over the large skylight in the auditorium had been drawn.

It was surprising that so many members attended scientific meetings, because the auditorium was insufficiently ventilated. Many physicians were heavy smokers, and a cloud of smoke gathered over the audience. The air was often foul despite the large blower fans atop the auditorium.

In the fall of 1942, 140 physicians signed up for a four-day course in the Medical Aspects of Chemical Warfare. They later formed a faculty to teach this subject to District physicians. At the War's close all efforts and time devoted to the Civilian Defense Program proved to be only precautionary. The organization was, of course, dissolved, but a new development—the atom bomb—resulted in its revival. Russia was soon to acquire this destructive weapon, and so began a war of nerves.

Headlines in *The Washington Daily News* for October 24, 1949 screamed: "Blue Monday' . . . Local Doctors Plan Atom's Disaster Corps without the Cooperation of Top Officials." The lead paragraph of the news story read: "Despite consistent indifference and lack of coöperation on the part of Defense and District officials the D. C. Medical Society today is determinedly working toward organizing itself to cope with the medical emergency that an atomic attack could bring to this city . . . ."

What sparked the sensational news story was a talk given by Dr. Luther H. Snyder, a member of the Society, before the Kober Medical Society entitled "Bombs Over Washington." He had sent copies of it to all the Washington newspapers.

Two years before, the Medical Society had called upon J. Russell Young, President of the Board of Commissioners of the District, and offered aid with the development of a Civil Defense medical program. (It should be noted that "civilian" had been abbreviated to "civil".) The society was informed that when its assistance was needed it would be notified. A year later the Society repeated its offer and was told by Commissioner Young that such a program was premature. The Society's Emergency Medical Committee decided to proceed with a program of its own.

*The Washington Star* editoralized on October 26, 1949 as follows:

"Unpleasant as it is to think about the horror of germ and atomic warfare, it is reassuring to learn that the medical profession is taking steps to prepare itself to respond if some grim emergency of the future should require medical mobilization. The District Medical Society like many similar organizations is giving serious thought as to how it could be of service to the community in such a crisis . . . .

"The District Medical Society is moving with proper calmness to assume its part in the Civil Defense obligation . . . ."

It must be remembered that the atomic bomb at that time, horrible as it was, had not become the destructive instrument it would be years later. It was during this period that there was widespread building of air-raid shelters.

The District Commissioners finally became actively interested in the Civil Defense program and appointed a medical committee. Dr. A. Clagett Gray was Chairman of the Medical Society's Committee on Emergency Medical Service. There was still much confusion in Civil Defense affairs. Funds had not been made available for the organization's needs.

The Observer commented in the *Medical Annals,* October 1950:

"These are days of contradiction, and it is not surprising that people are bewildered. High Government officials assure us, on one hand, that peace is close at hand and on the other that we must be prepared for any eventuality, even war; that we can lick Stalin with one hand behind us and that we are lamentably weak; that we need not concern ourselves too much about civil defense and that we are in danger of being wiped out unless we bestir ourselves . . . .

"In the light of such statements, it is not too surprising that those upon whom has fallen the responsibility for evolving a civil defense program have been hesitant about taking the initiative . . . .

"The District Medical Society's position in regard to civil defense has long been that Washington should be prepared for any eventuality. Some three years ago the Society established the Committee on Emergency Medical Service whose primary function was to develop a medical-care program that would be adequate in the event of disaster whether it would be of a peacetime or wartime nature . . . ."

Brigadier General Gordon B. Young, Engineer Commissioner for the District, wrote to the Medical Society inviting it to send representatives to a meeting on Civil Defense to be held on March 3, 1950, which invitation was promptly accepted. General Young presided at the meeting. He asked that the medical group take the leadership in developing an emergency medical program. Subsequently another meeting was held on March 24 and a temporary medical committee appointed.

There was some backstage maneuvering to take the medical leadership out of the hands of the Medical Society and to place it with Dr. Daniel L. Seckinger, Director of Health for the District. This was accomplished, but still the Civil Defense program languished.

Dr. W. D. Claudy, Chairman of a subcommittee of Dr. Seckinger's committee, came up with a minimum cost estimate of an adequate Civil Defense program. Dr. Claudy estimated that there would be 50,000 to 100,000 casualties and that the bare necessities would cost $25.00 a casualty.

The Observer was now more optimistic when he wrote in the *Medical Annals,* February 1951: "With official support and a modest appropriation by Congress the program is beginning to roll . . . ."

Under the reorganization a Medical Advisory Committee, with Dr. Charles Stanley White, Chairman, and the Executive Director of the Medical Society, Co-Chairman, had been appointed.

As the Observer was to comment later, the Civil Defense program never really rolled. He wrote in the *Medical Annals,* May 1951: "Either there is a need to prepare for such a disaster or there isn't. If there isn't we should stop pretending that Civil Defense is necessary. We should admit that it is a waste of manpower, money and time. On the other hand, if Civil Defense is vitally important to our safety there seems little excuse for the dilatory tactics which have been so demoralizing."

Under the caption "CD Fades" the Observer sounded the end of the program as it had originally been conceived.

Still not willing to accept defeat, Dr. Oscar B. Hunter, who now was the Chief Medical Officer, purchased a mobile first-aid unit which he gave to the Medical Society, which, in turn, gave it to the District Government.

The Civil Defense program refused to die, but it continued to be an exercise in futility. There were hair-brained schemes on evacuating Washington in case of atomic attack and the burial of casualties, but to no purpose. It remained a paper program. No one cared.

In the years that followed, the Medical Society developed a realistic emergency medical care program to cope with any disaster which might occur.

## Rationing

Wartime rationing in Washington, where physicians were concerned, was in the beginning more of a nuisance than a hardship, except for difficulties in transportation which was essential if they were to carry on their practices. Sales of automobiles had come to a stop in the early part of 1942. For the most part old cars had to do. Tires were replaced only if it could be shown that they were used in active practice and that they could not be retreaded or capped.

Gasoline rationing was the most frustrating of all. Physicians complained of standing in line for supplemental rationing coupons. The Executive Director of the Society managed with great difficulty to improve their lot; he arranged to have certain service stations supply gasoline only to doctors. But the supply rapidly dried up, and it was a matter of doctors going from one station to another seeking the precious fuel.

Obtaining oil for furnaces was also a problem and especially irksome to physicians who had offices in their homes.

Beginning in 1944 certain foods needed by ill patients were rationed. Fortunately a medical doctor was appointed chairman of the rationing board. This was then no longer a problem.

But the gasoline situation continued to be irksome. It was reported in the press that some physicians had to make calls on their patients by streetcar. The situation finally became intolerable. In exasperation the Executive Director of the Society notified the newspapers that if physicians were not provided with the necessary gasoline the profession could not be blamed for the health problems which might ensue. The news came to the attention of Senator McCarren, of Nevada, Chairman of the Senate District Committee. He had some harsh words for OPA (Office of Price Administration), and an adequate supply of gasoline was soon available to all physicians.

### Social Events

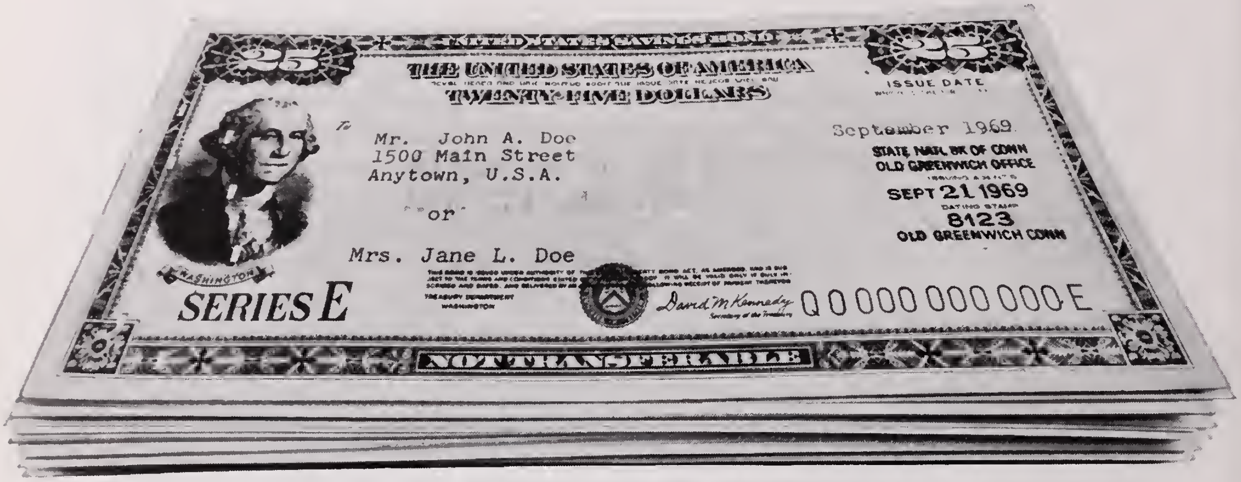
One of the social highlights on the home front during the War was held on March 24, 1946. It was Army-Navy Night, given by the Medical Society for wives and parents of physicians in the Armed Forces. The event had been suggested by Captain Darrell Crain, then serving in Australia. It proved to be a gala event, every seat in the auditorium, 486, being taken.

The back of the stage was festooned from top to bottom with red, white, and blue streamers. A large service flag hung in the back of the auditorium. Sewn on the white star on the flag was the number of physicians in Washington who were in the Armed Forces, then 238.

Dr. Fred R. Sanderson, President of the Medical Society, made introductory remarks and introduced Dr. Matthew White Perry, a physician of distinguished appearance, who presided. He introduced Major General George F. Lull, Acting Surgeon General of the Army: Vice Admiral Ross T. Mcinter, Surgeon General of the Navy and the President's Physician; and Lieutenant General A. Vandergrift, Commandant of Marines, who gave an eloquent address: "Beyond the Call of Duty." General Vandergrift had just returned from Guadalcanal.

Another event which should be mentioned was held in the Medical Society's building in June 1945. It was the occasion on which Major General Merritte W. Ireland, Surgeon General of the Army from 1918-1931, was honored. There had been few occasions in which the auditorium held so many distinguished persons. The 304th Army Service Band furnished the music from the balcony of the auditorium and nearly blew the roof off.

# Now all your U.S. Savings Bonds pay higher interest.



25

THE UNITED STATES OF AMERICA

TWENTY-FIVE DOLLARS

ISSUE DATE

Mr. John A. Doe
1500 Main Street
Anytown, U.S.A.
or
Mrs. Jane L. Doe

September 1969

STATE NAT'L BK OF CONN
OLD GREENWICH OFFICE
SEPT 21 1969
8123
OLD GREENWICH CONN

WASHINGTON

SERIES E

David M Kennedy

Q0 000 000 000E

NOT TRANSFERABLE

Now it's official.

Now one of the safest investments in the world brings you new and higher returns.

Now your U.S. Savings Bonds pay the highest interest in history: a full 5 per cent when held to maturity of 5 years and 10 months. (4% the first year; 5.20% thereafter to maturity). Previously, these bonds earned you only 4¼% if you held them for seven years.

The new interest began June 1, 1969. So all of the bonds you own, no matter when you bought them, have been collecting higher interest since that time.

Those bonds are still replaced if lost, stolen or burned.

You can still buy them through the payroll savings or a bond-a-month plan.

Regardless of your other investments, can you think of any easier, better, or safer way to build a nest egg for yourself?

It's nice to know that you are doing a little something for Uncle Sam, too. The $52 billion in U.S. Savings Bonds now outstanding in the hands of millions of Americans go a long way toward keeping your country financially strong.

There never was a better time to take stock in America.

There's a man at the place where you work who can start you on the Payroll Savings Plan right now.

UNITED STATES SAVINGS BONDS

Bonds are safe. If lost, stolen, or destroyed, we replace them. When needed, they can be cashed at your bank. Tax may be deferred until redemption. And always remember, Bonds are a proud way to save.

## Take stock in America.

With higher paying U.S. Savings Bonds.

# Editorials

## More on Methadone

### Hospital and Emergency Room Physicians

When a patient suspected of having a methadone overdose reaction is admitted to a hospital the physician should get the best possible history including the time, dose, and nature of the drugs ingested. If methadone has been taken orally within 1 or 2 hours of admission to the hospital, gastric contents should be emptied.

If a child is admitted and is conscious, but someone suspects he has ingested methadone, he should be placed under careful minute-to-minute observation. The child should be kept at the nurses' station or in another place where he can be continuously observed. Respiratory rate and amplitude should be noted every 15 minutes during the first 12 hours and he should be monitored carefully for 48 hours.

If a child is suspected of having ingested methadone and shows a decreasing level of consciousness, or amplitude of rate of breathing, he should be given a trial dose of Nalline intravenously in the amount of 0.1 mg/kg. A child admitted comatose or apneic should be treated similarly. An intravenous drip should be started so that doses may be repeated as needed. It is most important to establish the diagnosis of opiate (including methadone) overdose since Nalline is a specific antagonist for opiate drugs. Nalline may add to the respiratory depression caused by non-opiate drugs such as barbiturates.

If the response to the initial dose is equivocal it should be repeated in 15 to 30 minutes. Over the first 24 hours multiple doses may be needed. Nalline remains at therapeutic levels in the blood for several hours, whereas methadone may persist at toxic levels for 24 hours. Therefore if the patient responds well initially to Nalline it is imperative that careful monitoring every 15 minutes be continued for at least 24 hours. Because of methadone's prolonged action, several patients in New York have become comatose and died after initially responding well to Nalline because they were not continuously monitored for 24 hours and treated with repeated doses of Nalline as indicated.

Adults should be treated in the same way as children except that a 5 mg. initial dose is usually adequate to determine response to Nalline. This dose should be repeated as indicated on the basis of continuous monitoring of level of consciousness and air exchange.

Analysis of urine should be obtained as quickly as possible to confirm the diagnosis. Dialysis is not useful in the treatment of methadone overdose.

Methadone and heroin overdose reactions may be clinically indistinguishable if no history is available. The initial treatment is the same but the observation period is longer in the case of methadone overdose. Heroin's duration of action is similar to Nalline's, so the initial dose may be sufficient. Typically the methadone overdose requires more than one dose of Nalline, depending on the amount of methadone taken.

All Narcotics Treatment Administration patients carry identification cards listing their names and an emergency 24-hour NTA telephone number. All methadone dispensed from NTA is in labeled 2-ounce brown bottles with the patient's name on it. The label clearly indicates that the bottle contains methadone and that it may be harmful or even fatal if taken by anyone other than the patient for whom it was prescribed.

RICHARD N. KATON, M.D.
*Medical Director*
*Narcotics Treatment Administration*

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

## The Stigma of Malpractice

The stigma of "Malpractice" inflicts on a physician, a deep wound from which he cannot quickly recover. The practice of medicine is not easy, nor has it ever been. In the not too distant past we had to treat many diseases with inadequate remedies. Undoubtedly there are many physicians in practice today who can recall anguish felt at the bedside of a pneumonia victim in the days before anti-biotics, sulfa drugs, or antiserum. How would the fever fall, by crisis, by lysis or by that common denominator, which is all man's mortal lot? And there did the physician stand, only in hope that somehow he might help.

Today we have far better therapies, but all too often some (in fact, many) of our new drugs are two-edged swords–they can make the patient worse. No matter how much knowledge a physician may have, no matter how skillful he may be, nor how carefully and considerately he may try to practice, he can never exclude himself from the realm of human error. The decision to give or to withhold a drug often is not an easy one. At the time when the decision must be made it is often not so much based on absolute scientific fact as upon clinical judgment. Clinical judgments are so much easier to make in retrospect than they are at the moment they're needed. But, is an error in clinical judgment always malpractice?

If we apply strictly the legal definition of malpractice, there are several questions that must be answered: Was the doctor lacking in knowledge about the disease or the therapy undertaken? Did he lack skill, or did he fail to practice with a reasonable degree of care and diligence? It seems a bit difficult to believe that a physician, who is a certified specialist in his chosen field, who has built a great reputation, even an international one, and whose colleagues would be eager to say that he has practiced with skill and human care, would culpably fail in one case where he has helped so well so many others.

We can not answer these questions; we can only say that somehow, sometime everyone who contemplates being a patient must answer them. The situation of medical malpractice is so acute that the non-medical press has taken note of it. The Wall Street Journal (January 8, 1971) and Parade (Washington Post Edition) (January 10, 1971) have well reported the situation, and their report does not differ so widely from the editorial which follows. Indeed, the situation is so bad and seems to be becoming so much worse, that unless something is done to better it we may some day be faced with a real physician shortage. How many of our young men are going to be attracted to the practice of medicine if they must constantly live in the fear of being accused of malpractice for every patient they can not help?

The recent award of $600,000 (reportedly the largest award ever made in Medicolegal history) by a Montgomery County (Maryland) jury in a malpractice case against a physician has shaken the "medical community." Indeed, it should also have shaken the community as a whole, and for several reasons.

The first reason is exemplified by the query that several patients have put to me. "Doctor, why is it that the doctor who is sued is usually an outstanding man, one of the best in his field?" We agree essentially with the premise but the answer is not easy to formulate. Perhaps it is in part answered by the statement my former professor of surgery used to make (in the pre-antibiotics days): "Gentleman (referring to his students), the only surgeon who hasn't lost a case of appendicitis is the surgeon who has never had a case of appendicitis."

The more patients a physician sees, and the more difficult the cases he accepts, or the difficult therapy he applies, the more likely he is to have an un-toward result with subsequent implications of malpractice.

Indeed, when a physician of great capability as evidenced by a large successful practice and an international reputation is adjudged guilty of malpractice, this cannot help but shake the faith of many patients in their own physicians. Even in this day of miracle drugs and exotic surgery the loss (or compromise) of confidence in a physician still hurts the patients.

Some years ago I asked a prosecuting attorney privately in a malpractice case if he would accept the services for himself of the surgeon who was being tried, he said "Of course I would, he's the best in the city." One wonders if the prosecuting attorney in the case at hand would make a much different answer.

Next we must consider the effect of this medicolegal case on laboratory studies in relation to drug therapy. In the exhibition of any drug for any disease there is always the possibility of an adverse reaction. We have almost reached the level of the drug "so powerful that one has to be in perfect health to take it."

In the past the practicing physician has modified the requirements for laboratory studies by his clinical judgment. Now, is this going to change? Are we going to get a blood count, liver and kidney function studies before and during the administration of every drug? Certainly even the non-medical world would say "well not for every drug!" Yet even the wonder antibiotics have been indicted as potentially dangerous to the liver. It would seem that this medicolegal decision will increase greatly the amount of laboratory studies required during even "routine" drug therapy and will increase the cost of medical care for all.

Lastly, we must consider the alleged statments in the newspaper reports of this case, that the drug "has not been cleared for the use by the U. S. Food and Drug Administration." If we can not prescribe a drug for a disease for which there is evidence that the drug will be beneficial until it is cleared for the specific disease, then we are seriously hampered in the treatment of a disease our patients may suffer.

The Food and Drug administration is not licensed to practice medicine and surgery, it is not an "a priori" storehouse of medical knowledge. It is only a group of physicians and scientists who are trying their best to keep our standards of foods and drugs up to the highest possible level, and they can not evaluate all new drugs. They have to depend to a great extent on medical evidence supplied by non-F. D. A. physicians and scientists who are clinically evaluating drugs in man and animals.

It is good for the F. D. A. to be our guide in stopping the usage of dangerous or useless drugs. However, the mere fact that a drug has not been cleared by the F. D. A. for a specific disease should not be the sole criterion to interdict its usage.

There are many new drugs in denied use today that were brought out for one use (and apparently approved for some) but are used in other conditions. It would be folly to mention them here lest perhaps some patients who are taking them would learn of this "unapproved" usage and be unnecessarily alarmed. By way of specific cases, may I state that just a few days ago I saw a patient with a condition for which "classical and accepted" therapy had been ineffectual, who might have derived benefit from a new drug locally applied, but alas, the drug had only been cleared for use in the eye, and his condition was on another part of his body. He didn't receive the drug. I wonder how many people in our community would like to find themselves in a similar situation. It is a distasteful situation wished upon us by the Courts. Perhaps it is minor now, but I wonder how many persons in our community would consider it minor if they were the persons who couldn't have a non-F. D. A. approved drug that might help them.

RAYMOND A. OSBOURN, M.D.
*Clinical Associate Professor of Dermatology*
*Georgetown University Medical Center*

**We located our offices just off Farragut Square to better serve the professional* and personal insurance needs of doctors.**

Employees Workmen's Compensation • Bonds on Employees • Equipment Floater • Fire Insurance Contents • Business Expense Disability • Non-Cancellable Disability Income • Auto and Home Insurance

**As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*

# LETTERS TO THE EDITOR

## Doctors' Symphony Orchestra

Ted Wiprud's series on the D. C. Medical Society contributes a comprehensive and veridic history of the Society and reflects his inimitable and meticulous devotion to detail and accuracy. But to keep Ted's tail tidy, I must correct the chapter appearing in the March issue of the *Medical Annals*.

The section on the D. C. Doctors' Symphony Orchestra erroneously reports "the orchestra eventually passed out of existence." Not really.

It was resurrected in 1963 under the direction of a very talented and youthful musician, Robert Gutter, first trombone of the National Symphony Orchestra, who coached and coerced the prima donna doctors into a unified ensemble that made music together, with verve if not virtuosity and earned as creditable a review as Mr. Humes' in 1957. Cecelia H. Porter writing in the Washington Post of May 6, 1964 stated "Robert Gutter, already known for his excellence as a trombone player, appeared last night at the Cosmos Club as the conductor of the Doctors' Symphonetta.

When a man takes his baton in hand and draws fine music from a group of people mostly devoting their attention to the practice of medicine, then one suspects that the baton is actually a magic wand and that its wielder is a magician.

Gutter had a way of utilizing the resources of perception and energy which these players possessed. Since he wonderously transformed these positive features of the group into something quite alive, the obvious lack of technical facilities seemed a little less important.

The most unusual event of the program was the world premiere of the French suite for orchestra finished this year by the American, Duane Davidson."

Miss Porter then goes on and analyses this work and concludes "all in all, the orchestra handled the Davidson work with adequate facility and an extra amount of enthusiasm. The Symphonetta is to be commended for assuming the premiere of a modern piece."

Vaughn Williams' English Folk Song Suite, The Valdi's Concerto in C Major #4 for flute and strings and Hayden's symphony #100 in G Major the "military" preceded the Davidson opus.

The orchestra gave a solid interpretation of Hayden and of Vaughn Williams. The brass section seemed especially well prepared; but then, Gutter is a trombone player.

As noted, the reviewer accorded especial praise to "the brass." I do not consider it immodest to arrogate some of the credit since I was a member of the brass section and contributed substantial volume if not virtuosity.

We gave other concerts including one in honor of the Women's Auxillary of the Medical Society of the District of Columbia in June, 1964 and another in August, 1964 at the annual convention of the National Medical Association, and one in April, 1965. Mr. David Burchette, owner of the Dale Music Store, succeeded Mr. Gutter and generously contributed his talents and time until he became ill. Unless we can find another maestro to mold the musical medicos, it will be another silent spring.

I hope the finale has not been played, and that some benefactor will subsidize a conductor who will have the temperament, talent, and most of all temerity, to shake a stick at us again. In the idiom of Madame Butterfly perhaps "Un bel di vendremo."

In the meantime, we wait in the wings, but "have not passed out of existence."

HAROLD STEVENS, M.D.
*First French Horn and President of*
*the (past) Doctors' Orchestra*

---

## Clinical Center Studies

The cooperation of physicians is requested in the referral of patients with known or suspected intestinal malabsorption for studies being conducted by the National Institute of Arthritis and Metabolic Diseases' Digestive and Hereditary Diseases Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Needed for these studies are patients with such problems as local intestinal immune response in gluten-sensitive sprue and intestinal malabsorption associated with agammaglobulinemia and related disorders. The patho-physiology of Whipple's disease is under continuing study. Of particular interest for these and related investigations are patients with intestinal malabsorption of demonstrated or undiagnosed cause.

Upon completion of their studies, patients will be returned to the care of the referring physician, who will receive a summary of findings.

In making referrals, please mention the malabsorption project.

Physicians interested in having their patients considered for admission to these studies may write or telephone collect: Dr. Saul G. Agus, or Dr. Leonard Laster, Clinical Center, Room 9-D-15, National Institutes of Health, Bethesda, Maryland 20014. Telephone: (301) 496-4201.

# ►D.C. HEALTH NOTES

## Reorganization of the Community Health Services Administration

Primary medical care for the entire family will be provided under a new Directorate for Clinical Services within the Community Health Services Administration of the D. C. Department of Human Resources. The new Directorate is the result of a recent reorganization of the Administration. Dr. Lawrence A. Dunmore has been appointed to direct this program.

Traditional public health clinics in the past have provided categorical services predominantly in the areas of venereal disease and tuberculosis control, immunization, and maternal and child health. These categorical services have either been provided at differently scheduled clinic sessions in the same facilities or at different facilities scattered throughout the city. The purpose of the reorganization was to gather up these scattered categorical programs into single facilities with all services provided daily. General medical services have been added to develop a complete family practice type service at the neighborhood level. Neighborhood sites were selected on the basis of highest morbidity and mortality data and on the deficiency in physician-to-population ratio.

The Neighborhood Health Centers provide primary medical care including preventive services to all age groups. Each center offers family-centered medical care for designated geographical areas of approximately 25,000 population.

Each Neighborhood Health Center is assigned a team consisting of three physicians (Pediatrician, Internist and Ob-Gyn), nurses, social worker, nutritionist, laboratory technician and other supportive health personnel. Dental services are currently available on a limited basis in 3 of the 8 existing centers. Dental services will be added to those present facilities with available space and to all new clinics. Most family health needs can be provided for at the neighborhood clinics, but the more sophisticated diagnostic studies, including X-ray, at the present time are obtained by referral of the patient to D. C. General of other hospitals in the area of the clinics.

Other changes in the reorganization of the Community Health Services Administration include a name change from Health Services Administration, the elevation to Bureau status of the Air Pollution Division, the decentralization of the Bureau of Nursing, Nutrition Services, and Clinical Social Services to the Directorate for Clinical Services and realignment of other Divisions and Bureaus.

The Community Health Services Administration now is operating through 4 directorates—Administration, Clinical Services, Environmental Health and Preventive Services.

The Directorate for Environmental Health includes the Bureau of Air Pollution Control with its new Division of Compliance and Surveillance, and the Divisions of Engineering, Laboratory, and Program Development; the Bureau of Food and Drugs; Bureau of Public Health Engineering; and the Bureau of Environmental Management, which replaces the former Bureau of Community Hygiene.

The Environmental Health Directorate also is responsible for the War on Rats project, Water Quality Control, Solid Waste, Vector Control, Radiological Health, Industrial Hygiene, Drug and Chemical Control, Dairy Products, Public Health Inspection, Environmental Engineering, and Field Services.

The Directorate for Preventive Services includes Tuberculosis Epidemiology and Health Screening, Venereal and Communicable Disease Epidemiology, Home Care Services, Accident Prevention, Health Mobilization, Occupational and Employee Health, Supplemental Food Program, Accreditation and Licenses, Pharmacies, Dental Health, the Central Laboratory, Sexual Assault Project, Dental and Medical Apprenticeship, School Health Coordination, Regional Medical Program, and Public Health Residencies.

Copies of the new organization chart are available from the Office of Public Affairs; call 629-3641.

RAYMOND L. STANDARD, M.D., M.P.H.
*D. C. Director of Public Health*

---

## Ladies Auxiliary

Once again the Ladies Auxiliary of the Medical Society of the District of Columbia is sending drug samples to Equador through the Pan American Medical Society. These drug samples will be distributed to the needy under the supervision of the Red Cross and the physicians in Equador.

Physicians wishing to donate drug samples are requested to contact Mrs. W. Robert Perkins at Em-3-2192, for additional information.

Ef-
fic-
iency

**Dicarbosil**®
ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

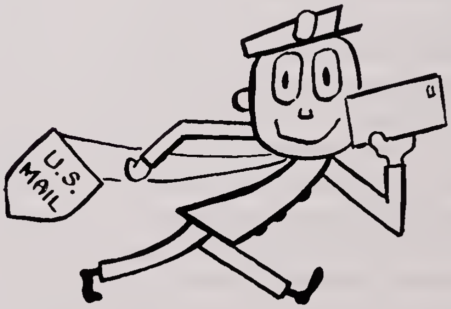
ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

One Gift
Works Many
Wonders
GIVE THE UNITED WAY

## Help us to serve you better.....

If your mailing label does not contain your zip code, note it on the label and return it to us for correction.

Remember, your Zip Code provides faster, more direct delivery of your journals. Use it on all correspondence, too.



# News & Personals

## SUMMARY OF EXECUTIVE BOARD ACTIONS

### Proceedings of the March 22 Meeting

Dinner was served for Board members in the Exhibit Hall of the Medical Society. Present were Drs. Henry D. Ecker, William S. McCune, Frank S. Bacon, Marvin C. Korengold, Darrell C. Crain, James E. Boland, Warren D. Brill, John J. Hughes, C. Willard Camalier, Jr., and Mr. Franc P. Ferraraccio, Secretary. Present by invitation were Dr. Arthur E. Wentz and Mr. Lem Anderson.

During the dinner Dr. Wentz presented a report on RMP activities. Dr. Ecker introduced Mr. Lem Anderson, the Society's Legislative Assistant, to the Board members.

The Executive session of the Board was called to order at 7:30 p.m. by the Chairman.

The minutes of the February 22 meeting were approved as submitted.

**Committee Meetings**: The Secretary reported the following committees had met since the last meeting of the Board:

| | | |
|---|---|---|
| February | 24 | Drug Abuse<br>Liaison with Hospitals |
| | 25 | House & Building |
| | 26 | Emergency Medical Service<br>Public Welfare |
| March | 1 | Environmental Health |
| | 2 | Medicolegal<br>Alcoholism |
| | 3 | Smoking & Health<br>Scientific Exhibits<br>Constitution and Bylaws |
| | 4 | Physician Placement<br>Communicable Disease |
| | 8 | Membership |
| | 9 | Medical Ethics and Professional Conduct<br>Board of Credentials |
| | 10 | Mental Health |
| | 11 | Maternal Welfare |
| | 12 | Utilization<br>Continuing Education |
| | 16 | Grievance<br>Liaison with Allied Professions<br>Public Information and Education |
| | 17 | Legislative<br>Drug Abuse<br>Liaison with Medical Schools |
| | 18 | Medicine and Religion |
| | 19 | Medical Aspects of Sports |

**Board of Credentials**: On recommendation, 7 applicants were elected to Active membership, 6 applicants were elected to Associate membership and 1 applicant was elected to Resident-Intern membership. Their names appear on page 345 Approval was given to the following changes in membership status:

*Transfers*

*Active to Associate:* Joseph Abrahams and Francis Hanusik
*Associate to Active:* Geraldine Paul
*Resident- Intern to Associate:* John J. Calarco

**Resignations**

*Active:* Justiniano Fernandez-Campa, Lawrence Greenberg and Ashok K. Kacker
*Associate:* Mathias J. Coleman
*Resident- Intern:* James S. Butler

**1971 Annual Business Meeting Rescheduled**: It was reported that the Medico-Chirurgical Society's Annual Meeting has been scheduled for Wednesday, November 17, therefore, the Medical Society will hold its Annual Business Meeting on Monday, November 15.

**Committee on Constitution and Bylaws Recommendation**: Following a lengthy discussion, a motion was made and carried to accept the recommendation of this Committee that Chapter 4, Article 1, Sections 2, 3, 4, 5, and 6 be deleted and the following substituted: "Section 2. Dues shall be set on an annual basis by the Executive Board"—with inclusion of the following amendment: "with the approval of the membership."

**Drug Dependency Committee Recommendations**: After lengthy discussion, the following motions were made and carried by this Committee on the issue of methadone detoxification: (1) that outpatient detoxification for narcotic addition with methadone not be conducted by private physicians unless it meets the criteria and is part of a program approved by the Medical Society of the District of Columbia, (2) that all physicians involved in methadone detoxification for narcotic addiction in a hospital setting be required to report them to the central registry, and (3) that the following definition of methadone detoxification for heroin addicts be adopted by the Medical Society of D.C.: Methadone detoxification should in no circumstances be prolonged longer than three months. A person under detoxification should not receive more than 50 mg/day at any time. The physician in charge of the patient's treatment should establish a schedule for gradually decreasing doses with abstinence to be achieved between a few days and three months after the start of methadone detoxification. Urine testing for illicit drug use must be conducted a minimum of twice a week. Under no circumstances shall a patient be classified as methadone detoxification for more than three months.

**Physicial Fitness Seminar:** For information it was stated that in past years the Medical Society had not received adequate mention in the printed material for the Physical Fitness Seminar. It was suggested that the Chairman of the Society's Public Information and Education Committee be contacted.

**News Media Dinner:** It was announced that the Annual Dinner Meeting of News Media Representatives would be held on April 12, 1971 at the Madison Hotel.

**Establishment of Limits in the New Society Umbrella Policy:** After considerable discussion on this subject, a motion was made and carried (with Drs. McCune and Korengold voting against) that the limit on the Umbrella Policy recommended by Russell, Marsh and Kennedy, Inc. be set at $2,000,000 with a premium of $650.00 per year for a three year period.

**Joint Committee of the Medical Society of D.C. and the Medico-Chirurgical Society of D.C.:** After discussion, the Board approved the appointment by the President of a joint committee of the Medical Society and the Medico-Chirurgical Society to study the delivery of medical care to the inner-city population.

**Travel Tours:** The Chairman referred to actions taken in 1970 by Dr. Pellegrini on the subject and pointed out that the announcement approved for the 1971 trip was different from the one being circulated to the membership.

It was agreed that in order to safeguard the Society in the future only a bonded travel service will be used. Dr. Korengold will confer with Dr. Pellegrini as to the best method of conveying to the membership that the Society has approved a trip but is in no way sponsoring it.

**Appointment of a Committee on Liaison with the Woman's Auxiliary:** It was pointed out that a liaison committee has been in existence in the past, however, Dr. Korengold would like at this time to appoint a committee to work with the Auxiliary on matters of mutual interest.

## Other Business

1. For the record, the methadone position statement that was approved by the Board on March 15, 1971 was noted as follows:

> *Preface:* Methadone has a legitimate place in the therapy of heroin addiction by its inclusion in a structured program of methadone maintenance which includes appropriate and sufficient personal and social support and rehabilitation mechanisms . . . such as psychological and psychiatric support, peer group assistance, remedial education and training and job placement assistance.
>
> "Methadone maintenance" itself is but one mode in the overall approach to heroin addiction which should include detoxification, withdrawal and abstinence, and the therapeutic community approach, each in a variety of forms and establishments.
>
> *Statement:* We acknowledge that there are good existing community facilities for treatment of heroin addiction by methadone and/or withdrawal therapy. Therefore, we urge strongly that physicians recognize the complexities of total therapy necessary for heroin addiction. Further, we urge that physicians should cooperate with the appropriate authorities by offering this type of care only with their consent and approval. The following guidelines are deemed by the Society to be necessary for the protection of the patient, the physician himself, and society in general. We believe that only by so doing will his actions be responsible.
>
> *Guidelines for maintenance:*
>
> (1) The physician must have prior consent and approval of the appropriate local authorities. (Director of NTA and D.C. Medical Society)
>
> (2) All patients, both outpatients and inpatients, must be registered in the area Central Registry, the medical confidentiality of information therein to be preserved.

(3) The physician must provide specific, recurring data to the Registry.

(4) Each physician must participate in a continuing training program sponsored by the Medical Societies.

(5) A weekly report by computer printout will be returned from the Central Registry to the physician for his reference, guidance, and file on his patient's methadone dosage levels, visits, and urine testing.

*Guidelines for Detoxification:* Methadone detoxification should in no circumstances be prolonged longer than three months. A person under detoxification should not receive more than 50 mg/day at any time. Beyond this period the dosage one arbitrarily considers continued methadone requirement or use to be methadone maintenance. The physician in charge of the patient's treatment should establish a schedule for gradually decreasing doses with abstinence to be achieved between a few days and three months after the start of methadone detoxification. A minimum of two urine tests per week must be conducted. Inpatient Detoxification: All physicians may conduct methadone detoxification for narcotic addiction in a hospital setting. The patient must be reported to the Central Registry. Outpatient *Detoxification:* Outpatient detoxification for narcotic addiction with methadone is not to be conducted by private physicians unless it meets the above criteria for both maintenance and detoxification.

2. The Board noted for information that the Utilization Review Workshop to be conducted by Dr. Edwin P. Parker, III, Chairman of the Society's Utilization Committee will be held on May 5, 1971.

3. Dr. Ecker reported that letters have been sent to the Department of Motor Vehicles regarding the questionnaire for drivers permits, as recommended by Dr. Gates.

4. Following a brief report by Dr. Crain, a motion was made and carried to endorse the United States Savings Bond program and to urge Society members and their staffs to participate therein.

5. After discussion, a motion was made and unanimously carried that the Medical Society encourage the three University Hospitals, and Children's Hospital to establish programs for treatment of narcotic addiction.

There being no further business the meeting was adjourned at 10:05 p.m.

# ►NEW MEMBERS

## Active

FATON GASHI, M.D. Office: 3800 Reservoir Road. Born in Albania. Medical degree: University of Rome (Italy), 1953. Specialty: Physical Medicine and Rehabilitation.

DAVID H. GOODMAN, M.D. Office: 2150 Pennsylvania Avenue. Born in Washington, D. C. Medical degree: George Washington University, 1963. Specialty: Internal Medicine, Hematology.

JOSEPH E. GUTIERREZ, M.D. Office: 1835 Eye Street. Born in Manila. Medical degree: Marquette University, 1961. Specialty: General Surgery.

RICHARD J. HAVLIK, M.D. Office: D. C. General Hospital. Born in Berwyn, Illinois. Medical degree: Northwestern University, 1964. Specialty: Internal Medicine.

JOHN A. KACHMARICK, M.D. Office: 5185 MacArthur Boulevard. Born in Philadelphia, Pennsylvania. Medical degree: George Washington University, 1962. Specialty: Psychiatry.

DELMER D. KENNEDY, M.D. Office: 1310 Southern Avenue, S.E. Born in Henryetta, Oklahoma. Medical degree: University of Oklahoma, 1964. Specialty: Emergency Medicine.

JAMES A. SCHOETTLER, M.D. Office: 2430 Pennsylvania Avenue. Born in San Diego, California. Medical degree: Johns Hopkins University School of Medicine, 1957. Specialty: Psychiatry.

## Associate

JOHN R. BUELL, M.D. Office: 8116 Gorman Avenue, Laurel, Maryland. Born in Sparrows Point, Maryland. Medical degree: University of Maryland, 1951. Specialty: General Practice.

LOUIS HELLMAN, M.D. Office: 330 Independence Avenue, S. W., Department of Public Health. Born in St. Louis, Missouri. Medical degree: Johns Hopkins University School of Medicine, 1934. Specialty: Obstetrics-Gynecology.

DONALD C. MEEK, M.D. Office: 3506 Dundee Drive, Chevy Chase. Born in Los Angeles, California. Medical degree: Ohio State University, 1961. Specialty: Obstetrics-Gynecology.

DAVID A. SHACHAT, M.D. Office: 10401 Old Georgetown Road, Bethesda. Born in Newark, New Jersey. Medical degree: University of Alabama, 1963. Specialty: Dermatology.

ISAAC WEISZER, M.D. Office: 5415 West Cedar Lane, Bethesda. Born in Antwerp, Belgium, Medical degree: University of Illinois, 1960. Specialty: Allergy.

JEAN YACOUBIAN, M.D. Office: 6400 Goldsboro Road, Bethesda. Born in Beirut, Lebanon. Medical degree: American University of Beirut, Lebanon, 1951. Specialty: Psychiatry.

**Resident-Intern**

EDWARD G. KOCH, M.D. Office: George Washington University Hospital. Born in Baldwin, New York. Medical degree: George Washington University, 1969. Specialty: Obstetrics-Gynecology.

## NATIONAL & REGIONAL MEETINGS

- May 24–26: American Ophthalmological Society. The Homestead, Hot Springs, Virginia. Address: Dr. Samuel D. McPherson, Jr., Secretary-Treasurer, 1110 West Main Street, Durham, North Carolina 27701.
- May 25–27: American Larynogological, Rhinological, and Otological Society. San Francisco. Address: Dr. Louis E. Silcox, Secretary, 108-111 Lankenau Medical Building, Philadelphia, Pennsylvania 19151.
- **June 14–16: American Neurological Association. Shoreham Hotel, Washington, D.C. Address: Dr. Samuel A. Trufant, Secretary-Treasurer, Cincinnati General Hospital, Cincinnati, Ohio 45229.**
- June 20–24: American Medical Association. Atlantic City, New Jersey. Address: Dr. Ernest B. Howard, Vice-President, 535 North Dearborn Street, Chicago, Illinois 60610.
- June 21–23: American College of Preventive Medicine (Interim Meeting). Atlantic City, New Jersey. Address: Mr. Ward Bentley, Executive Director, 801 Old Lancaster Road, Bryn Mawr, Pennsylvania 19010.
- August 15–18: International Symposium on Drug Tolerance, Addiction, Abuse and Methadone Treatment, Sponsored by Xavier University of Louisiana, College of Pharmacy. New Orleans. Address: Dr. Jasbir M. Singh, Director of Symposium, Xavier University of Louisiana 7325 Palmetto Street, New Orleans, Louisiana 70125.
- **September 7–12: International Congress of Pharmaceutical Sciences, 31st, Sponsored by International Pharmaceutical Federation. Sheraton-Park Hotel, Washington, D.C. Address: Mr. George B. Griffenhagen, Secretary, c/o American Pharmaceutical Association, 2155 Constitution Avenue, N.W., Washington, D.C. 20037.**

## DOCPAC BRIEFS

### CAN YOU HELP?

In a recent DOCPAC Brief Dr. Darrell Crain President-Elect of the Medical Society referred to the apathy of doctors where politics is concerned. That there is apathy cannot be denied, but the reasons for this apparent lack of concern are not easily found. Perhaps it may be that doctors are too busy taking care of patients and keeping current with the never ending changes taking place in the field of medicine, or it may be the traditional feeling of the professional man that he should stay out of politics, or it may be that some believe that it is too late to do anything about things, that "socialism" is here already or inevitable. So how can we fight it.

It is precisely because change is inevitable that the doctor must find time to become involved. The way medical care is to be delivered is an intrinsic part of medical practice and it is far too important to be left to the politicians.

The proper interest of the doctor and all of the people is to see to it that everyone receives quality medical care in an efficient manner. Only the doctor can deliver this care. Some believe that huge bureaucracies placed between the doctor and his patients can somehow deliver better medical care to more people at less cost. This myth must be dispelled.

Doctor Korengold, President of the D. C. Medical Society, stated in his editorial in a recent issue of the MEDICAL ANNALS that changes are necessary but there is a choice. Let us help formulate those plans that we know will do the job.

We must participate more than ever in political activities and DOCPAC is the organization that gives the doctor a powerful voice. AMPAC, the parent organization, is doing impressive things and your participation can help make it stronger by extending your influence wherever you think it will do the most good.

Many of your colleagues have given a great deal of time and energy to DOCPAC activities, they deserve and need your help.

ASHUR G. CHAVOOR
*Vice Chairman*
*D. C. Political Action Committee*

# GENERAL NEWS

**Dr. John C. Rose** was elected to the **Board of** Directors of the **National Council of the National Society for Medical Research**, at the annual NSMR National Council meeting held on February 13, 1971 in Chicago.

Dr. Rose, Dean of the Medical School at Georgetown University since 1963, is also a Diplomate of the American Board of Internal Medicine, and a Fellow in the American College of Physicians. He is a member of the American Physiological Society, the Biophysicial Society, the Society for Experimental Biology and Medicine, and the American Federation for Clinical Research. Since 1962, Dr. Rose has served as Editor of *American Family Physician*.

Two "**Golden Apples**" were polished by medical students at the George Washington University on March 12, and presented as tributes for excellence in teaching to **Dr. Frank N. Miller, Jr.**, Professor of Pathology, and to **Dr. Milton Corn**, Associate Professor of Medicine.

The "apple" awards are presented annually to two instructors, one each from the basic and the clinical sciences, at the climax of the students' spoof of the faculty, the Medical School Follies.

Stimulated by a 30% increase in the annual grant from the March of Dimes National Foundation, the **Department of Neurology and Neurosurgery of Children's Hospital** is expanding the services of its **Birth Defects Clinic**. Dr. Beale H. Ong, Program Director for the Birth Defects Center, states that the Center expects to see from 25 to 30 new patients afflicted with meningomyelocele yearly, and is offering, for the first time, genetic counselling to patients' parents.

The Birth Defects Center is a multidisciplinary clinic devoted to the treatment of congenital defects involving the central nervous system. It was established by a grant from the March of Dimes in 1962, and has grown steadily since that time.

The new genetics counselling program will be under the direction of Dr. Cecil B. Jacobson, Associate Professor of Obstetrics and Gynecology and Chief of the Reproductive Genetics Unit at the George Washington University School of Medicine.

Raymond A. Osbourn, M.D.

At the Annual Meeting of the Georgetown Clinical Society held on March 10, 1971, **Dr. Raymond A. Osbourn** was recipient of the **Man of the Year** Award for his outstanding contributions in the field of medicine and to Georgetown University.

Dr. Osbourn has been engaged in the private practice of Dermatology since 1945. He is currently a Clinical Associate Professor of Dermatology at Georgetown Medical Center, and the senior attending physician in Dermatology at Providence Hospital. Author of over 20 scientific publications, Dr. Osbourn is also active in numerous clubs and societies related to his specialty.

**Mr. Noel E. Kroncke** has been appointed **Administrator of the Children's Hospital of the District of Columbia**, effective March 23, 1971.

Prior to coming to Children's Hospital he held the post of Associate Administrator of the Decatur Memorial Hospital in Decatur, Illinois.

A graduate of Gettysburg College, he received his Masters in Hospital Administration from Washington University in St. Louis, Missouri.

By Executive Committee Action on February 1, 1971, the name of the Metropolitan Hospital for Extended Care was changed to **Metropolitan Hospital.**

In the first "**doctor draft**" since 1969, the Defense Department has requested the drafting of 1,531 physicians during 1971. The draft, beginning in July, will also call 77 osteopaths and 536 dentists.

According to Dr. Louis N. Rousselot, Assistant Secretary of Defense, the call-up came after two appeals to join the Berry Plan went largely unheeded by young physicians.

**Dr. Bertram C. Snyder** was recently elected **President of the Virginia Society of Internal Medicine.** A resident of Arlington, Dr. Snyder is currently Treasurer of the Arlington County Medical Society, and is a Clinical Assistant Professor of Medicine at the Georgetown University School of Medicine.

**Dr. Jack Kleh**, Chairman of the Medical Service Board of the District of Columbia, has been named official delegate of the Plan for all meetings of the **National Association of Blue Shield Plans**, with Dr. Philip H. Philbin as first alternate, and Victor M. Brian as second alternate.

A grant in the amount of $67,500 has been awarded to the Clinical Engineering Department of the **George Washington University** by the Engineering Foundation Board, United Engineering Trustees, Inc., to support a project coordinating engineering technology with the delivery of health services.

During 1970, the **number of physicians in the United States** increased by 9,102, according to a report by the American Medical Association's Center for Health Services Research and Development. This brings the current total of physicians in the U.S. to 334,044.

Surgical Supplies and Equipment

*Complete Fitting Service for*
*Ladies and Men*

KLOMAN SURGICAL SUPPLY CO.
1028 19th Street, N.W.
Washington, D. C. 20036

*Telephone:* 223-3444

KALORAMA CONVALESCENT HOME, INC.

of Licenses and Licensed by the D. C. Department Inspections

INSTITUTIONAL CARE
for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

NURSES REGISTRY

LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

- desirable associates
- office space
- ancillary services
- may be obtained thru

A CLASSIFIED ADVERTISEMENT

- in the MEDICAL ANNALS

RMK

*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

**MEETINGS, SEMINARS** in refreshing country-estate atmosphere. Golf, tennis, lakes. Versatile new conference facilities for up to 250. Dining in historic Old Mill Room, new Tack Room (cocktails).

*Write for Meetings Portfolio or call 703-296-2181.*

**THE BOAR'S HEAD INN**
Charlottesville, Virginia

**MAXWELL AND TENNYSON INC.**

M&T

*Pharmacists*

916 19th. St. N.W., Washington, D.C.

"WHERE PHARMACY IS A PROFESSION"

BIOLOGICALS • VACCINES • SERUMS •
HYPO-ALLERGENIC COSMETICS •
ORTHOPEDIC APPLIANCES AND GARMENTS
(QUALIFIED FITTERS)
INHALATION THERAPY AND
ELECTRIC AIR PURIFIERS
(QUALIFIED INHALATION THERAPIST)

**CONVALESCENT AIDS**

AVAILABLE FOR RENTAL OR SALE

**Phone 223-4711 or 223-9797/8**

**HOURS:** 8 am to 7 pm—Mon. Thru Fri.—Sat. 8 am to 2 pm
**CLOSED** Sunday and Holidays

# The bluest blue chip of them all.

Danny Sullivan never made the baseball team. But because he's had the right training, you'd be surprised at the number of jobs open to him.

The nicest part, of course, is that another handicapped person is getting the most out of his life.

However, there's something else good, too.

Vocational rehabilitation pays.

Every dollar spent to rehabilitate a person like him—someone with a physical or mental handicap—will increase his lifetime earnings by $35. (Thirty-five taxable dollars that he earns himself.)

Which is why vocational rehabilitation is good for everybody.

We call our program HURRAH. Actually, HURRAH stands for "Help Us Reach & Rehabilitate America's Handicapped."

When you realize there are five million handicapped people who can be helped by vocational rehabilitation, you can see what a big job is ahead.

If you want to know more about the job that vocational rehabilitation is doing, and the rich dividends it pays, write to HURRAH, Box 1200, Washington, D.C. 20013.

Ask for "Rehabilitation—A Blue Chip Investment." It's free.

Then if anyone ever asks you if rehabilitation is worth the cost, you'll know what we at HURRAH have found out:

From every angle, a human being is the bluest blue chip investment there is.

HURRAH. The State-Federal Program of Rehabilitation Services.

Help Us Reach & Rehabilitate
America's Handicapped **HURRAH**

advertising contributed for the public good

The U.S. Department of Health,
Education, and Welfare.

when an unnerving experience
compounds the pain

## the compound analgesic that calms instead of caffeinates

In addition to pain, this patient has experienced anxiety, fear, embarrassment, and frustration. No doubt these psychic factors actually increased her perception of pain. Surely the last thing she needs is an analgesic containing caffeine. The logical choice is Phenaphen with Codeine. It provides a quarter grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can control the pain more effectively. It's no accident that the Phenaphen formulations contain a sedative rather than a stimulant. Don't you agree, Doctor, that psychic overlay is an important factor in most of the accident cases you see?

# Phenaphen®
# with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate. 0.031 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming). **Indications:** Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

A. H. Robins Company, Richmond, Va.

A-H-ROBINS

'head clear upon arising'

For upper respiratory allergies and infections including the common cold, Dimetapp Extentabs® effectively relieve the stuffiness, drip and congestion all night and all day long on just one Extentab every 12 hours. For most patients drowsiness or overstimulation is unlikely.

*prescribing information appears on next page*

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220

**Dimetapp Extentabs®**

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg

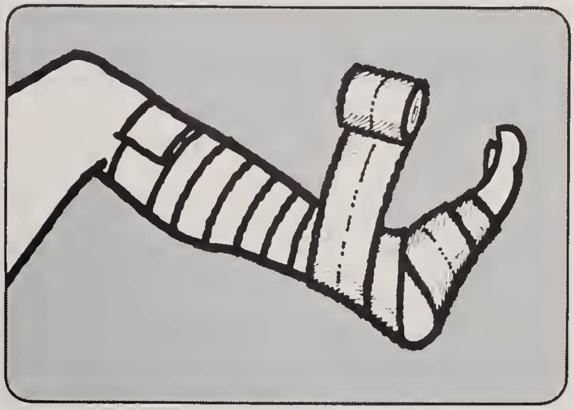
## Dimetapp Extentabs®

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.
CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.
WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.
PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.
ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.
HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

**PRIMER®**

*PLUS*

**Flexoplast®**



**A practical, ambulatory treatment for leg ulceration**

**The Flexible Cast:** The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

**EDWARD TAYLOR Ltd.**
A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me

☐ literature

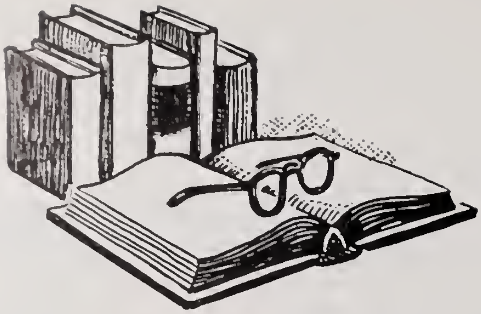
☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name ............................. M.D.

Address ..............................

City ..................................

State .................. Zip ..........



# Book Reviews

**Selective Bibliography of Orthopaedic Surgery.** Second Edition. AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS. Price, $7.25. Pp. 114 with no illustrations. St. Louis: Mosby Company, 1970.

Few titles accurately portray the content of the book to be devoured, but this is one of the rare exceptions. Indeed, the book is an entire bibliography and, as the old cliche goes, it is a large cast of characters but not much plot. The book, however, like the telephone directory, is invaluable for location of pertinent information. It is well-organized in three general parts: (1) Clinical Orthopedics, (2) Basic Sciences and Related Subjects, and (3) Miscellaneous; and, as well, is anatomically subdivided into shoulder girdle; shoulder and arm; elbow; forearm; wrist and hand; pelvis; hip and thigh; knee and leg; and ankle and foot. In addition the spine has its own separate category.

The over-all selection of articles to be included seems to be generally quite inclusive and of good quality. It contains many of the old classics, but by its copyright of 1970 it is quite up-to-date as well.

The only potential rub is that the subject matter is arranged in alphabetical order of the authors, and if you are looking for subject matter with author unknown one has to wade through an entire section to find what you are looking for, which may mean approximately forty to fifty different bibliographies. There seems, however, no better way to do it without making the book unduly cumbersome.

In my estimation, the book is a must for any practicing orthopedic surgeon and could very likely be even more valuable for those strong and brave non-orthopedic physicians who venture into the work of orthopedic surgery.

ROBERT P. NIRSCHL, M. S., M. D.

**An Introduction to Neurosurgery, 2nd edition.** BRYAN JENNETT, M.D. Price, $13.50. Pp. 365 with illustrations. St. Louis: Mosby, 1970.

Mr. Jennett has written here a precise, concise up-to-date and very pleasant book to read. In 352 pages he covers all the chapters pertaining to neurosurgery. The amount of information conveyed is great because Mr. Jennett tries to be eminently practical. The book is addressed primarily to the senior medical student interested in neurosurgery, the junior neurosurgical resident or the practioner involved in a neurosurgical problem. However, the practicing neurosurgeon will find his worth in reading it as it discusses in a few pages what is the state of the art. He manages to combine the basic pathophysiology with a clinical discussion as well as the diagnostic procedure including not only the more common ones but the more recent and sophisticated such as RISA cisternography and regional cerebral blood flow. The first 200 pages are devoted to intracranial tumors and this chapter may appear to be proportionately too long; however, the space is used to explain the neurological examination, exemplify the abnormalities in diagnostic tests and describe in a superficial but useful manner the various craniotomy techniques. The most attractive feature, I think, is the presence of references described as "further reading" immediately following the discussion of a specific topic without waiting for the end of a chapter or the end of the book. This allows the interested reader to quickly find what may take otherwise much longer. The title of the article or book is written in full, that is, American style rather than the more concise, but I think less useful British way of just giving the name of the author and the journal volume and page. In his introduction Mr. Jennett quotes Samuel Butler saying, "Life is the art of drawing sufficient conclusion from insufficient premises" and I think he does that beautifully.

GUY W. GARGOUR, M.D.

**The Early Orthopaedic Surgeons of America.** ALFRED RIVES SHANDS, JR., M.D. Price, $15.00. Pp. 190. St. Louis: Mosby, 1970.

Orthopaedic surgery is one of the recent specialties in medicine, started and named by the British surgeon, Mr. William John Little. Doctor Shands, whose father was one of the first orthopaedic surgeons in Washington, D. C., has prepared a very interesting history of the development of the specialty in the United States by describing the achievements of the twelve physicians who labored in the field and left a lasting impression.

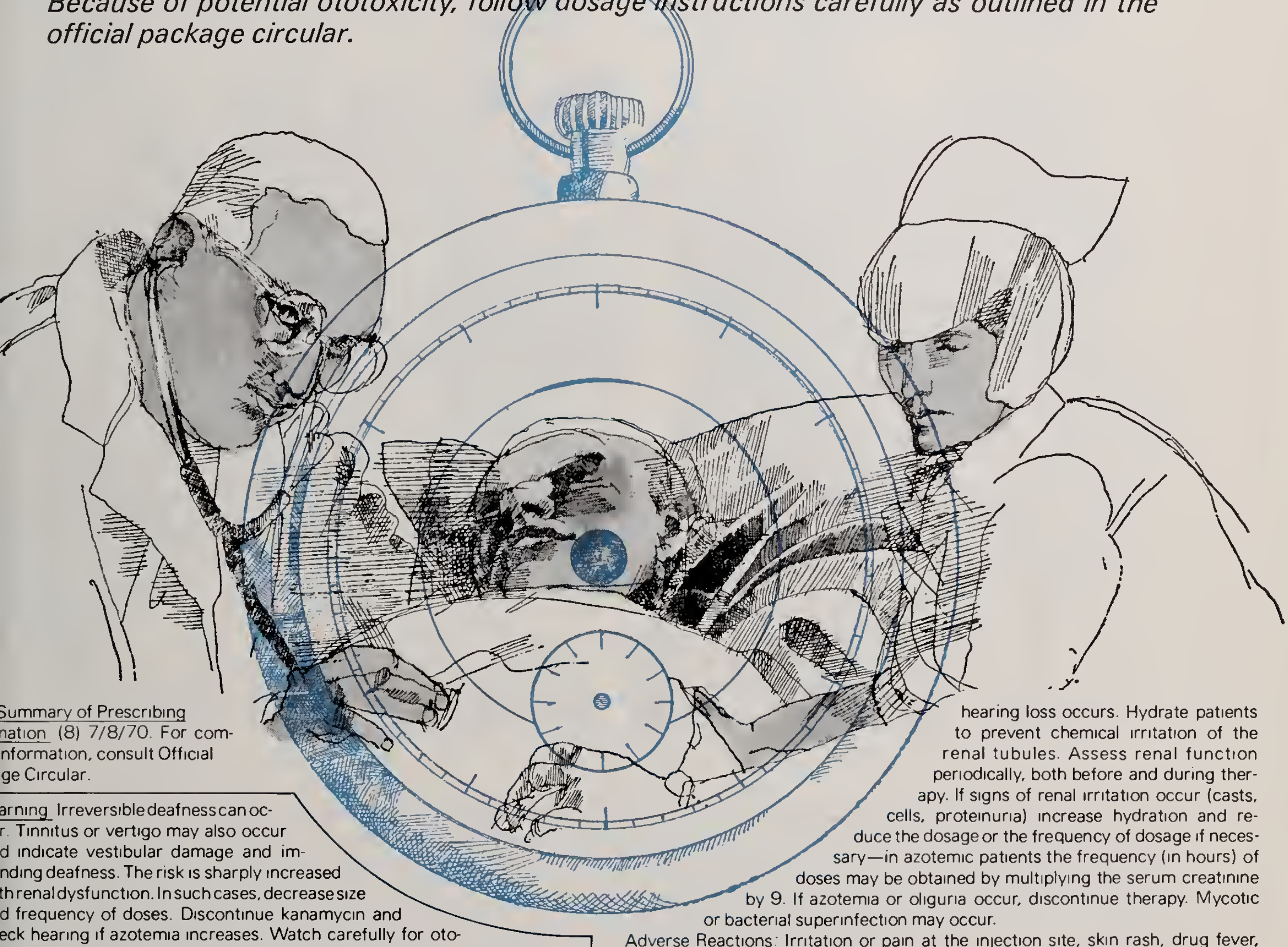
The book tells about the men who undertook the treatment of the handicapped, beginning with Dr.

# A valuable hospital antibiotic —when there is no time

**in severe systemic infections**—postoperative bacteremia, Gram-negative/staph pneumonias or neonatal sepsis—Kantrex® (kanamycin sulfate) is often indicated before results of customary sensitivity tests can be reported. Clinical response is often seen within 24-48 hours in susceptible infections, with remission soon after.

**10 years of experience** confirm the continuing effectiveness of Kantrex® against many Gram-negative bacilli (most Pseudomonas are resistant) and staph.

*Because of potential ototoxicity, follow dosage instructions carefully as outlined in the official package circular.*



Summary of Prescribing
nation (8) 7/8/70. For com-
nformation, consult Official
ge Circular.

arning Irreversible deafness can oc-
r. Tinnitus or vertigo may also occur
d indicate vestibular damage and im-
nding deafness. The risk is sharply increased
th renal dysfunction. In such cases, decrease size
d frequency of doses. Discontinue kanamycin and
eck hearing if azotemia increases. Watch carefully for oto-
xicity in older patients and patients receiving more than 15 Gm. of kana-
ycin. To avoid neuromuscular paralysis with respiratory depression, post-
ne intraperitoneal instillation in post-operative patients until recovery
om anesthesia and muscle relaxants is complete. Avoid concurrent use of
her ototoxic drugs including ethacrynic acid. Safety in pregnancy is not
tablished.

tions Serious infections due to susceptible strains of *E. coli*, Proteus sp.,
*obacter aerogenes, K. pneumoniae, Serratia marcescens* and *Mima-Herellea*.
re and sensitivity studies should be performed.
aindications: A history of hypersensitivity to the drug Prior auditory damage
namycin or other agents may be a contraindication if effective alternative
py is available.
utions: Obtain audiograms before and during therapy in patients with renal
nction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or
hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary—in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

Supplied Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. and 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml.

A.H.F.S. Category 8:12.28

**BRISTOL** BRISTOL LABORATORIES
Division of Bristol-Myers Company, Syracuse, New York 13201

# KANTREX® INJECTION
## (kanamycin sulfate)

# They all have two things in common: they have monilial vaginitis;

**CANDEPTIN now gives you complete therapeutic flexibility.**

It is the specific high potency antimonilial agent which provides superior effectiveness. And there is at least one dosage form to meet every patient's individual needs and/or preference.

**CANDEPTIN — more advantages for your patients...**

**It's fast**—prompt symptomatic relief of itching, burning, candidiasis discharge and malodor in 48-72 hours; usually cures completely in a single 14-day course of therapy.

**It's safe**—no side effects, clinical reports of irritation or sensitization have been extremely rare; exact dosage can be assured.[5,6]

**It's convenient**—easy to use in all forms, encourages patient acceptance and cooperation; therapy can be started in your office.

**It's clinically proven**—Candicidin is significantly more potent in vitro than nystatin,[1] and has a record of cure rates of 90% and more in pregnant and non-pregnant patients.[2,3,4] In two recent studies, both involving gravid and non-gravid patients, a 100% culture-confirmed cure rate was achieved with 14 days of therapy.[5,6]

**CANDEPTIN (candicidin) Vaginal Tablets, Vaginal Ointment, and . . . new VAGELETTES™**

Now Vagelettes offer a unique new dosage form—candicidin ointment in a soft gelatin capsule — for virtually unlimited application. With Candeptin in three forms, your range of therapy has been extended to meet even those previously difficult-to-treat Candida cases.

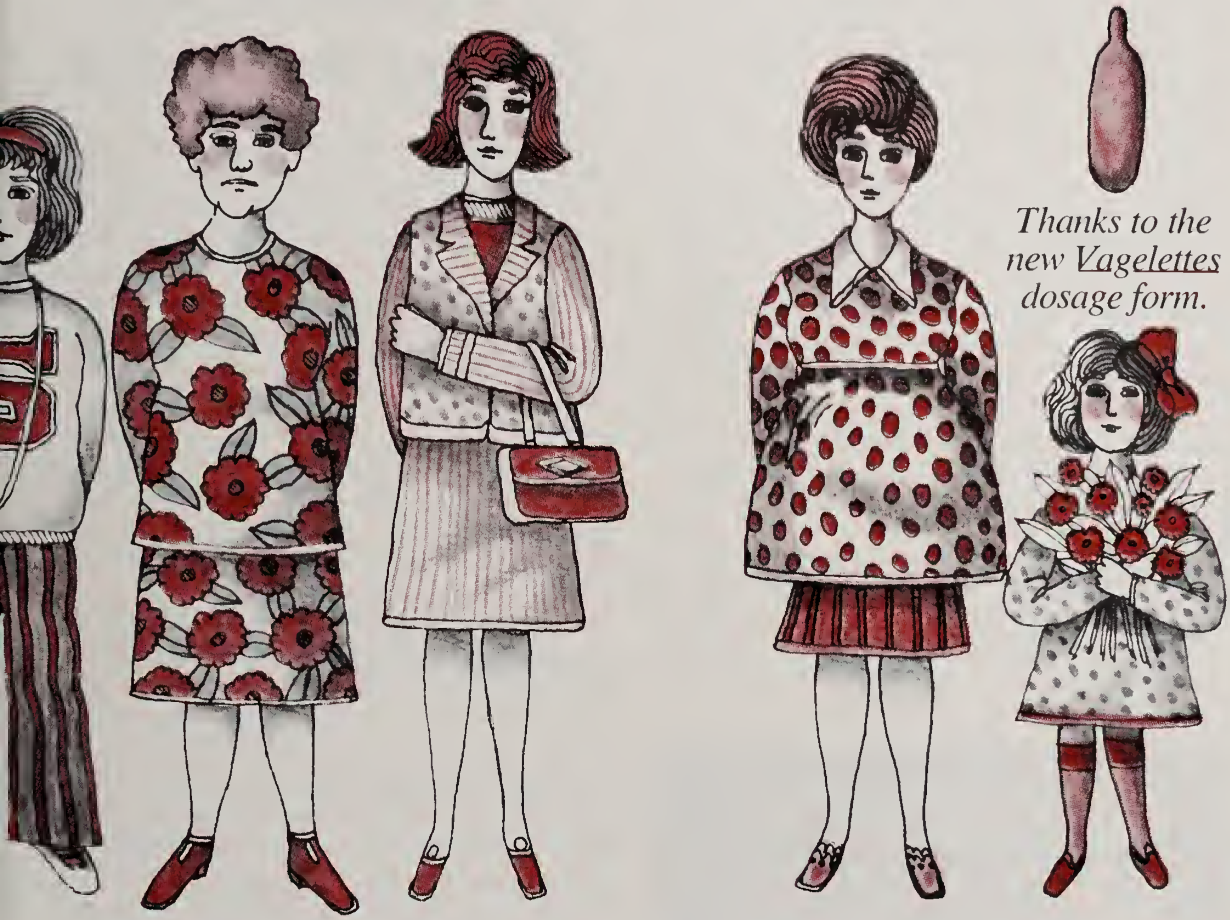
☐ For the young patient—cut off the tip of the narrow soft end of the Candeptin Vagelette and extrude contents through the intact hymen.

☐ For the gravid patient—easy manual insertion without the need for an applicator or inserter for intravaginal use.

☐ For the multiple needs of all your patients—topical application for labial involvement, intravaginal use to treat mucosal infestation.

**References:** 1. Lechevalier, H.: Antibiotics Annual 1959-1960. New York, Antibiotica Inc., 1960. pp. 614-618. 2. Olsen, J.R.: Journal-Lancet *85*:287 (July) 1965. 3. Giorlando, S.W., Torres, J.F., and Muscillo, G.: Am. J. Obst. & Gynec. *90*:370 (Oct. 1) 1964. 4. Friedel, H.J.: Maryland M.J., *15*:36 (Feb.) 1966. 5. Giorlando, S.W.: to be published 1971. 6. Decker, A.: Case Reports on File, Medical Department, Julius Schmid.

# ey can now be cured with Candeptin. Even these two.



*Thanks to the new Vagelettes dosage form.*

**NDEPTIN®**
dicidin Vaginal Tablets, Ointment, VAGELETTES™

**cription:** Candeptin (candicidin) Vaginal Ointment contains
spersion of candicidin powder equivalent to 0.6 mg. per gm.
.06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Can-
din is contained in 5 gm. of ointment or one applicatorful.
deptin Vaginal Tablets contain Candicidin powder equiva-
to 3 mg. (0.3%) Candicidin activity dispersed in starch,
ose and magnesium stearate. Candeptin Vagelettes contain 3
of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.

**ion:** Candeptin Vaginal Ointment, Vaginal Tablets and Vagel-
s possess anti-monilial activity.

**cations:** Vaginitis due to *Candida albicans* and other candida
ies.

**traindications:** Contraindicated for patients known to be
itive to any of its components. During pregnancy manual
let or Vagelette insertion may be preferred since the use of
ointment applicator or tablet inserter may be contraindicated.

**tion:** During treatment it is recommended that the patient re-
from sexual intercourse or the husband wear a condom to
d re-infection.

**erse Reaction:** Clinical reports of sensitization or temporary
ation with Candeptin Vaginal Ointment, Vaginal Tablets or
elettes have been extremely rare.

**age:** One vaginal applicatorful of Candeptin Ointment or
Vaginal Tablet or one Vagelette is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

**Available Dosage Forms:** Candeptin Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). Candeptin Vaginal Tablets are packaged in boxes of 28, in foil with inserter — enough for a full course of treatment. Candeptin Vagelettes are packaged in boxes of 14. (14-day regimen requires 2 boxes).

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

**Candeptin®**
**(candicidin)** Vaginal Tablets/Ointment, VAGELETTES™ Vaginal Capsules

*depend on it as your agent of first choice*

Innovators in Candicidin Therapy
**Julius Schmid Pharmaceuticals**
423 West 55th Street
New York, New York 10019

William Ludwig Detmold, the German Army surgeon who came to New York in 1837. Replete with pictures of early devices and apparatus to correct deformities, caricatures, anecdotes, quotations from articles and papers read at meetings, as well as the first hospitals devoted to the handicapped, each of the twelve famous nineteenth century specialists is introduced and described in a most interesting and lively manner.

The final chapter gives a brief summary of the biographies, as the author explains to answer the question, "Who was each one?"

It is worthy of note, as can be learned from reading Doctor Shands' latest book, that orthopaedic surgery started as a "despised and rejected art;" and through the special talents and devotion of those who pioneered in this field, orthopaedic surgery is now accepted as a highly respected specialty, with numerous hospitals widely distributed throughout the world exclusively devoted to it for treatment of patients requiring special care and for instruction in the art.

Doctor Shands' book makes inspiring reading and is a valuable reference for source material.

MAURICE H. HERZMARK, M.D.

DataMedics

**The result is total management control & increased cash flow**

DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

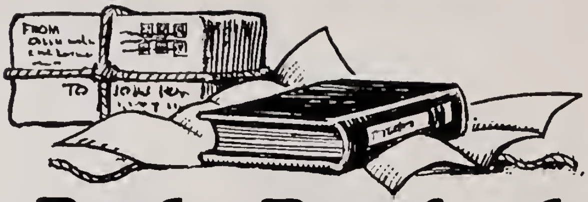
Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:

- Billing
- Bookkeeping
- Collecting delinquent accounts
- Designing offices
- Leasing equipment
- Preparing insurance claim data
- Preparing payroll tax data
- Recruiting personnel
- Training personnel

**How?**
Consultation by appointment.

DM

**DataMedics, Inc.**
**National Headquarters**
**7979 Old Georgetown Road**
**Washington, D.C. 20014**
**(301) 654-7666**
**Cable/Medic**
**Baltimore (301) 792-4424**



# Books Received

**Cancer, Diagnosis, Treatment, and Prognosis.** 4th edition. LAUREN V. ACKERMAN, M.D. and JUAN A. DEL REGATO, M.D. Price, $39.50. Pp. 1050 with illustrations. St. Louis: Mosby, 1970.

**Clinical Approach to Endocrine Problems in Children.** MATTHEW STEINER, M.D. Price, $29.50. Pp. 420 with 402 illustrations. St. Louis: Mosby, 1970.

**The Clinical Recognition of Congenital Heart Disease.** JOSEPH K. PERLOFF, M.D. Price, $25.00. Pp. 606, with 578 illustrations. Philadelphia: Saunders, 1970.

**Congenital and Pediatric Glaucomas.** ROBERT N. SHAFFER, M.D., and DANIEL I. WEISS, M.D. Price, $20.50. Pp. 221 with 253 illustrations. St. Louis: Mosby, 1970.

**Corneal Contact Lenses.** 2nd edition. LOUIS J. GIRARD, M.D., and MEMBERS OF THE CONTACT LENS SECTION, DEPARTMENT OF OPHTHALMOLOGY, BAYLOR COLLEGE OF MEDICINE, HOUSTON, TEXAS. Price, $23.00. Pp. 348 with 373 illustrations. St. Louis: Mosby Co., 1970.

**Current Dermatologic Management.** STUART MADDIN, M.D., and TERRENCE H. BROWN, B.S.P., M.S. & PH.D. editors. Price $38.75. Pp. 330 with 116 illustrations. St. Louis: Mosby, 1970.

**Hernia Repair Without Disability.** IRVING L. LICHTENSTEIN, M.D. Price, $26.50. Pp. 210 with 113 illustrations. St. Louis: Mosby, 1970.

**The Immunology of Malignant Disease.** JULES E. HARRIS, M.D., and JOSEPH G. SINKOVICS, M.D. Price, $15.00. Pp. 251 with illustrations. St. Louis: Mosby, 1970.

**Management of the Patient with Subnormal Vision.** 2nd edition. GERALD FONDA, M.D. Price, $13.00. Pp. 167 with 114 illustrations. St. Louis: Mosby, 1970.

# OBITUARIES

## William J. Tobin, M.D.
## 1910–1971

Dr. William J. Tobin, an orthopaedic surgeon, died March 3, 1971. He lived at 5129 Watson Place, N. W.

A native of Charleston, S. C. he was a graduate of the University of Charleston's undergraduate and medical schools. Dr. Tobin interned at Mercy Hospital from 1935 to 1936. He served residencies at Johns Hopkins University Hospital, 1937 to 1938; Massachusetts General Hospital; Children's Hospital, Boston; and Boston City Hospital, 1938 to 1940.

During World War II he served in the U. S. Army Medical Corps. While with the Army Medical Corps, he was chief of orthopaedics at several hospitals and was on the staff at Walter Reed General Hospital at the end of the war.

Dr. Tobin lectured extensively on orthopaedic surgery in the United States and Europe. He received the American Academy of Orthopaedic Surgery's gold medal for an exhibit on gross osteopathy in ancient races. He had also been honored by the National Foundation of Infantile Paralysis and the Biological Photographic Association for an article on bone architecture.

Dr. Tobin was on the staff of Georgetown, Children's D. C. General, Sibley Memorial, and Doctors Hospitals. He was a consultant in orthopaedics to the Army and Navy surgeons general. He was on the faculty of the Naval Medical School and was a clinical associate professor at Georgetown University School of Medicine.

A former chairman of the Southern Medical Association, he belonged to many professional organizations, including the American Association for the Advancement of Science, the Association of Consultants to the Surgeon General, and the Medical Society of the District of Columbia.

He is survived by his wife, Fehra M.; a daughter, Mrs. Joan Drag of Pittsburgh; a son, Donald, a student at the University of Ft. Lauderdale in Florida; two brothers and a sister.

## Richard E. Kelso, M.D.
## 1910–1971

Dr. Richard E. Kelso, founder of the Kelso Medical Laboratory, died March 25, 1971. He lived at 2757 N. Nelson Street, Arlington, Virginia.

A native of Phillipsburg, New Jersey, he received his medical degree in 1939 from George Washington University.

He was on the staff of Arlington, Alexandria, Suburban and La Plata Hospitals, as well as the Falls Church Medical Center; he was formerly on the pathology faculty at the George Washington University.

In 1940 Dr. Kelso developed a 24-hour pregnancy test using rats instead of rabbits. In 1947 he was a co-founder of the Falls Church Medical Center. In 1959 with the aide of his late wife, the former Anne Hill, he established the Middleburg Health Center, Middleburg, Virginia.

He leaves two daughters, Mrs. Jane Frazer of Arlington and Mrs. Sara Schultz of Washington; three sons, Richard S.; Robert M.; and David B. The family requested expressions of sympathy be in the form of contributions to the George Washington University Medical School Building Fund.

## Harry S. Douglas, M.D.
## 1904–1971

Harry S. Douglas, M.D., an obstetrician-gynecologist died March 25, 1971. He lived at 5514 Greystone, Somerset, Maryland.

A native of New York City, Dr. Douglas received his medical degree in 1932 from the George Washington University. He served his internship at Grace Hospital, New Haven, Connecticut from 1932 to 1934.

Dr. Douglas was fellow of the American College of Obstetricians and Gynecologists; the American Medical Association; the Medical Society of the District of Columbia; the Washington Gynecology Society; the George Washington Medical Society, and the Jacobi Society. He was also a member of the Phi Delta Epsilon Medical Fraternity.

He is survived by his wife Bernadine; a daughter, Mrs. Herman Kagan of Ventura, California; and three sisters.

*Long recording experience*
*and low rates*

**Audiorich**

*Recording studio*
*and on-location recording*
**24-HOUR PHONE: 585-5092**

Gone with the wind

**The gas/acid group of disorders**

The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

**Frees captured gas...neutralizes free acid**

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

**Always in good taste**

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in:
gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity •
gastritis • dyspepsia

*when the patient prefers the convenience of a tablet, select*

Silain-Gel® Tablets:

*when the patient prefers a liquid, select*

Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

nger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

# Silain-Gel®

**Tablets:** simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide
**Liquid:** simethicone plus aluminum hydroxide and magnesium hydroxide

One dose does both: frees captured gas...neutralizes free acid

A·H ROBINS A.H. Robins Company, Richmond, Virginia 23220

sterile solution (300 mg per ml.)

# Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

and single-dose 2 m
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials…

10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES→
2cc. Sterile Solution No. 80
Lincocin®
(lincomycin hydrochloride injection)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN

©1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

nce-popular treatment for back pains
s to have the seventh son of a seventh son
nd or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

headache, a sovereign remedy was
vear a snakeskin round one's head.

**A realistic approach to pain relief**

**Empirin'®**

**mpound with Codeine**
**hosphate gr. 1/2 No. 3**

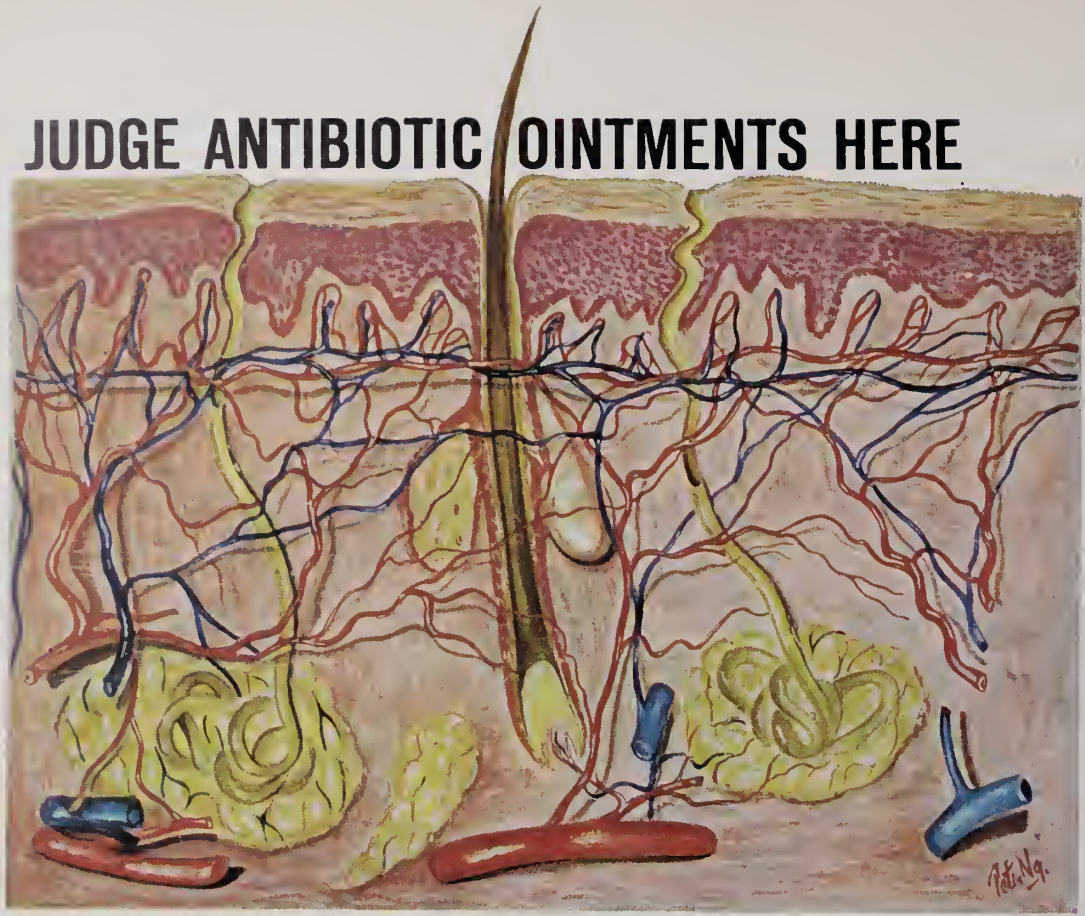
tablet contains:
eine Phosphate gr. 1/2 (Warning—
be habit forming), Phenacetin gr. 2 1/2,
rin gr. 3 1/2, Caffeine gr. 1/2.

**eeps the promise**
**pain relief**

Co.' narcotic products are
'B", and as such are available on oral
ption, where State law permits.

**BURROUGHS WELLCOME & CO. (U.S.A.) INC.**
**Tuckahoe, N.Y.**

JUDGE ANTIBIOTIC OINTMENTS HERE



**Results on skin are final proof of any topical antibiotic's effectiveness**

**No in vitro test can duplicate a clinical situation on living skin.** 'Neosporin' (polymyxin B —bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

**Caution:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.
**Contraindications:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
**Supplied:** Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.
Complete literature available on request from Professional Services Dept. PML.

**'NEOSPORIN'®**
brand
POLYMYXIN B-BACITRACIN-NEOMYCIN
**OINTMENT**

**BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.**

THIS SPACE CONTRIBUTED BY THE PUBLISHER AS A PUBLIC SERVICE

# the quality of survival

With the steady improvement in the therapy of cancer, and consequent increase in the number of 5-year survivals, our programs reflect increasing concern with the future of the cancer patient—with the *quality* of his survival.

High priority is being given to the rehabilitation of cancer patients—those having had mastectomies, colostomies, laryngectomies, amputations, and other drastic treatments for cancer.

Our "Reach to Recovery" program is a dramatic example. This program helps the physician meet many special needs of the postmastectomy patient on the road to total recovery. Patients receive psychological reassurance and practical help from women who have had the same surgery.

The laryngectomee also receives the benefit of our rehabilitation program. Supported by the Society, the International Association of Laryngectomees, through its local IAL clubs, provides such services as individual and group speech therapy, psychological counseling, visits to new patients, safety training, public education and social activities.

Our rehabilitation programs not only give heart and help to patients but provide the physician with vital aids necessary to improve the *quality* of survival.

**American Cancer Society**

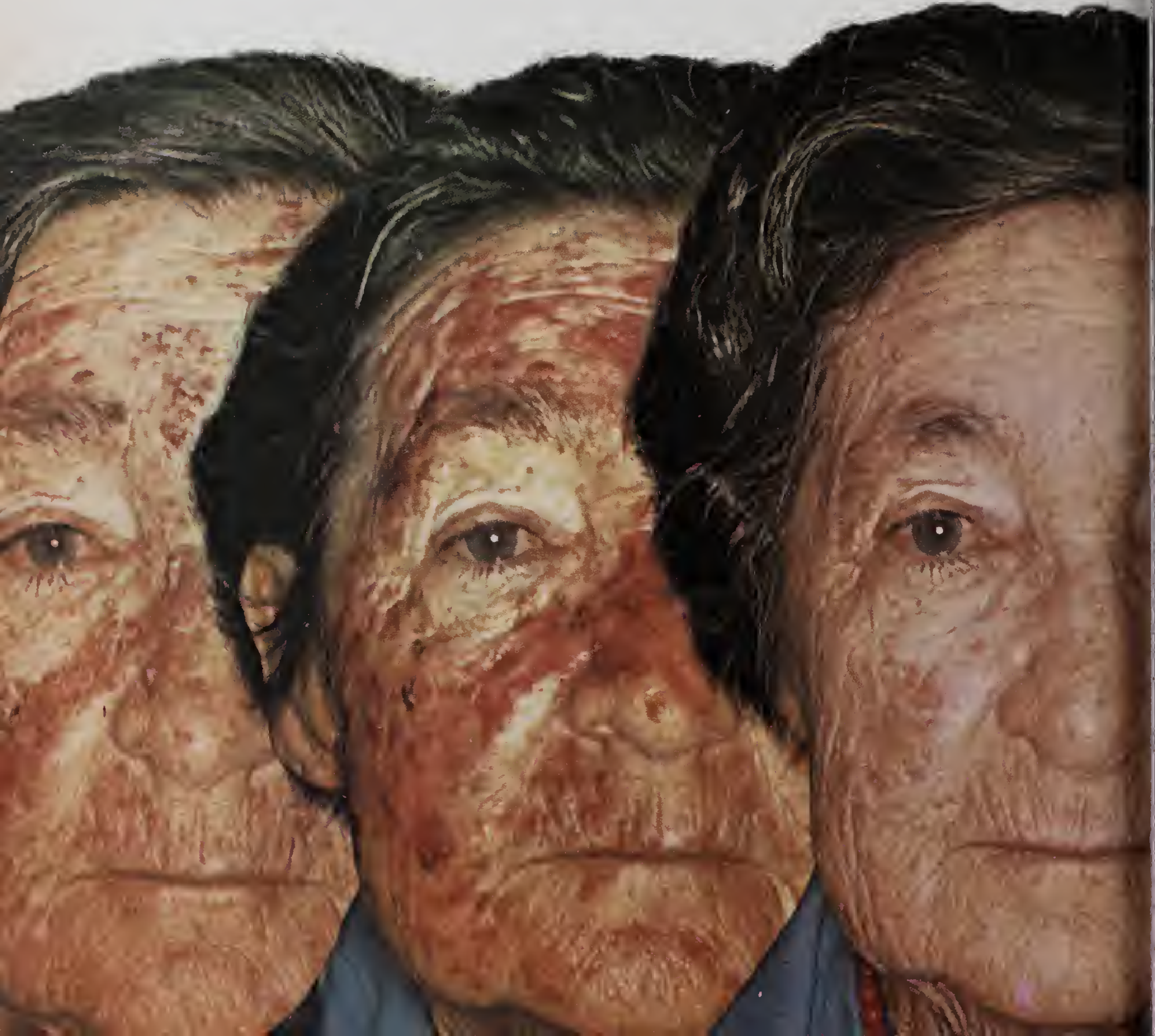
Efudex®
(fluorouracil)
cream/solution

In the treatment of solar/actinic keratoses –
An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completel Residual mild erythema remains in som areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.



ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

# An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

# Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

# Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins o subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response s so predictable, lesions which do not respond should be biopsied.

# Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or s a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

Data on file, Hoffmann - La Roche Inc., Nutley, New Jersey.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

25 Gm
EFUDEX®
TOPICAL
CREAM 5%
preparation of fluorouracil ROCHE
Item 72630
NDC-4 1506 03

new
Efudex®
(fluorouracil)
cream/solution

# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

*Classified advertisements of a professional nature are free to members.*

## REAL ESTATE

FOR SALE: Ideal doctors, dentist office/residence on close-in corner lot in Burnt Mills, Silver Spring. Beautifully landscaped and in immaculate condition. Perfectly suited to your professional needs. 3 bedrooms, each with private bath; large living room, dining room, and family room. Spacious kitchen with walkway to offices & reception area. Private entrance and separate patient parking area. Call for appointment to inspect, Snider Brothers, Inc., 7730 Wisconsin Avenue, Bethesda, Maryland 20014, (301) 652-4570.

VACATION RENTAL: Henlopen Avenue, Rehoboth Beach. 4 bedrooms, 2 baths, never rented before. Air conditioned, all electric, all appliances, all conveniences for family. Contact Dr. D. Starr, (202) Ad2-2696.

## OFFICE SPACE AVAILABLE

FOR RENT: Office for 2 doctors, 5323 Connecticut Avenue, N.W. 3 examining rooms, 1 lab., 1 x-ray, and 1 waiting room. Contact Resident-manager, Mr. Adams, (202) 362-7847.

FOR RENT: 1726 Eye Street, N.W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298-6936.

FOR RENT: Prime office space, Falls Church. 750 Sq. ft. in professional building, $275.00 per month. Call (703) 534-3314.

FREE MEDICAL OFFICE SPACE: D.C. licensed physician interested in the use of 1100 sq. ft. of space in medical building on Eye St., N.W. in exchange for medical coverage of adjacent para medical corporation. For more details call Mr. Reilly (202) 298-9084.

## PHYSICIANS WANTED

HOUSE OFFICERS WANTED: Medicine and Ob/Gyn. 350 bed community hospital in suburban D.C. E.C.F.M.G. and Permanent or Immigrant Visa required. Inquire: Medical Staff Office, Holy Cross Hospital of Silver Spring, 1500 Forest Glen Road, Silver Spring, Maryland 20910.

## EQUIPMENT FOR SALE

FOR SALE: Autoclave, office model Castle 999. Two tray. Excellent condition. Call (202) 296-2296.

## INVESTMENTS

INVESTORS: For low risk start-up venture of a weekly newsletter that will report on the activity occurring within a government function. Documented market survey verifies public demand as well as excellent return on investment. Proposal available on request. Write P.O. Box 34117, West Bethesda, Maryland 20034.

U.S.S.R
CHINA
INDIA
SAIGON
INDONESIA
AUSTRALIA

"Around the World in 80 Days"...

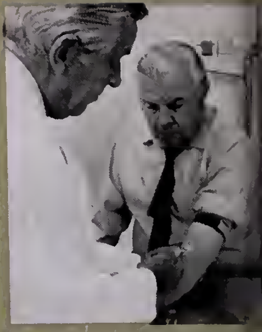
. . .An expense-paid trip with one hitch -- a 60-day hitch in a South Viet Nam civilian hospital delivering vitally needed medical care to the people of South Viet Nam.

American physicians are urgently needed, especially general practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists.

For further information please write to:

**Program Director**
**Volunteer Physicians for Viet Nam**
**American Medical Association**
**535 North Dearborn Street**
**Chicago, Illinois 60610**

*in stable adult diabetes, if diet alone fails...*



# start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

---

*A Distinctive Oral Hypoglycemic*

---

# a biguanide... not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

# DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

# lowers elevated blood sugar

## ow to prescribe DBI®-TD (phenformin HCl)

### start with DBI-TD

| | |
|---|---|
| **Week 1** | 1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal. |
| **Week 2** | Continue effective DBI-TD dosage.<br>If necessary, add an additional capsule to the A.M. or P.M. dose. |
| **Thereafter** | Continue effective DBI-TD dosage. |

**To transfer from sulfonylurea therapy to DBI-TD alone:** The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

**To transfer from sulfonylurea therapy to combined therapy with DBI-TD:** The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

**dications:** Stable adult diabetes mellitus; sulfonylurea fail-
es, primary and secondary. **Contraindications:** Diabetes mel-
us that can be regulated by diet alone; juvenile diabetes that
uncomplicated and well regulated on insulin; acute compli-
tions of diabetes (metabolic acidosis, coma, infection, gan-
ene); surgery; severe hepatic disease; renal disease with
emia; cardiovascular collapse, after disease states associated
th hypoxemia. **Warning:** Use during pregnancy is to be avoided.
til adequate data on the effects of DBI on the human fetus
available, such use can be considered experimental. **Pre-
utions: Starvation Ketosis,** which must be differentiated
m "insulin lack" ketosis, and is characterized by ketonuria
spite of relatively normal blood and urine sugar, may result
m excessive DBI therapy, excessive insulin reduction or
ufficient carbohydrate intake. Adjustment of DBI-TD or
ulin dosage, or supplying carbohydrates, alleviates this
te. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING
OOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not rec-
mended in the presence of azotemia or in any clinical situa-
n that predisposes to sustained hypotension that could lead
lactic acidosis. To differentiate lactic acidosis from ketoacido-
, it is recommended that periodic determinations of ketones
in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331. Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV

# INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

| | Page |
|---|---|
| **Business Counseling** | |
| Data Medics | T-358 |
| **Dietetic Products** | |
| Campbell Soup Company | T-325 |
| **Insurance** | |
| McDermott Insurance, Inc. | T-339 |
| Mutual of Omaha | 3-C |
| **Equipment and Supplies** | |
| Kloman Surgical Supply Company | T-348 |
| **Investment Planning** | |
| Russell, Marsh, & Kennedy | T-349 |
| **Nurse Registries** | |
| Association of Undergraduate and Practical Nurse Registry | T-348 |
| District of Columbia Manpower Administration | T-337 |
| **Pharmaceuticals** | |
| Arch Laboratories | T-342 |
| Bristol Laboratories | T-355 |
| Burroughs-Wellcome | 11–12 |
| Geigy Pharmaceutical | 4 |
| Eli Lilly & Company | 8 |
| National Drug | T-329, 330, 21, 22 |
| Riker Laboratories | 6–7 |
| A. H. Robins Company | 9, T-351, 352–353, 360 |
| Roche Laboratories | 2-C-1, 13, 14–15, 4-C |
| Julius Schmid, Inc. | T-356–357 |
| G. D. Searle | T-326-327 |
| Stuart Pharmaceutical | T-328 |
| Edward Taylor, Ltd. | T-353 |
| The Upjohn Company | 10 |
| USV Pharmaceutical Corp. | 17, 18–19 |
| **Pharmacies** | |
| Maxwell & Tennyson | T-349 |
| Peoples Drug Stores | 2 |
| **Recording Services** | |
| Richard O. Repplier | T-359 |
| **Sanitariums** | |
| Kalorama Convalescent Home | T-348 |
| **Vacation & Recreation** | |
| Boar's Head Inn | T-349 |

T-text

# The girth control pill

# epanil® Ten-tab®

(continuous release form)

**diethylpropion hydrochloride, N.F.)**

hen girth gets out of control, TEPANIL can provide sound pport for the weight control program you recommend. PANIL reduces the appetite—patients enjoy food but eat ss. Weight loss is significant—gradual—yet there is a relaely low incidence of CNS stimulation.

**ntraindications:** Concurrently with MAO inhibitors, in patients hypersensitive to drug; in emotionally unstable patients susceptible to drug abuse.

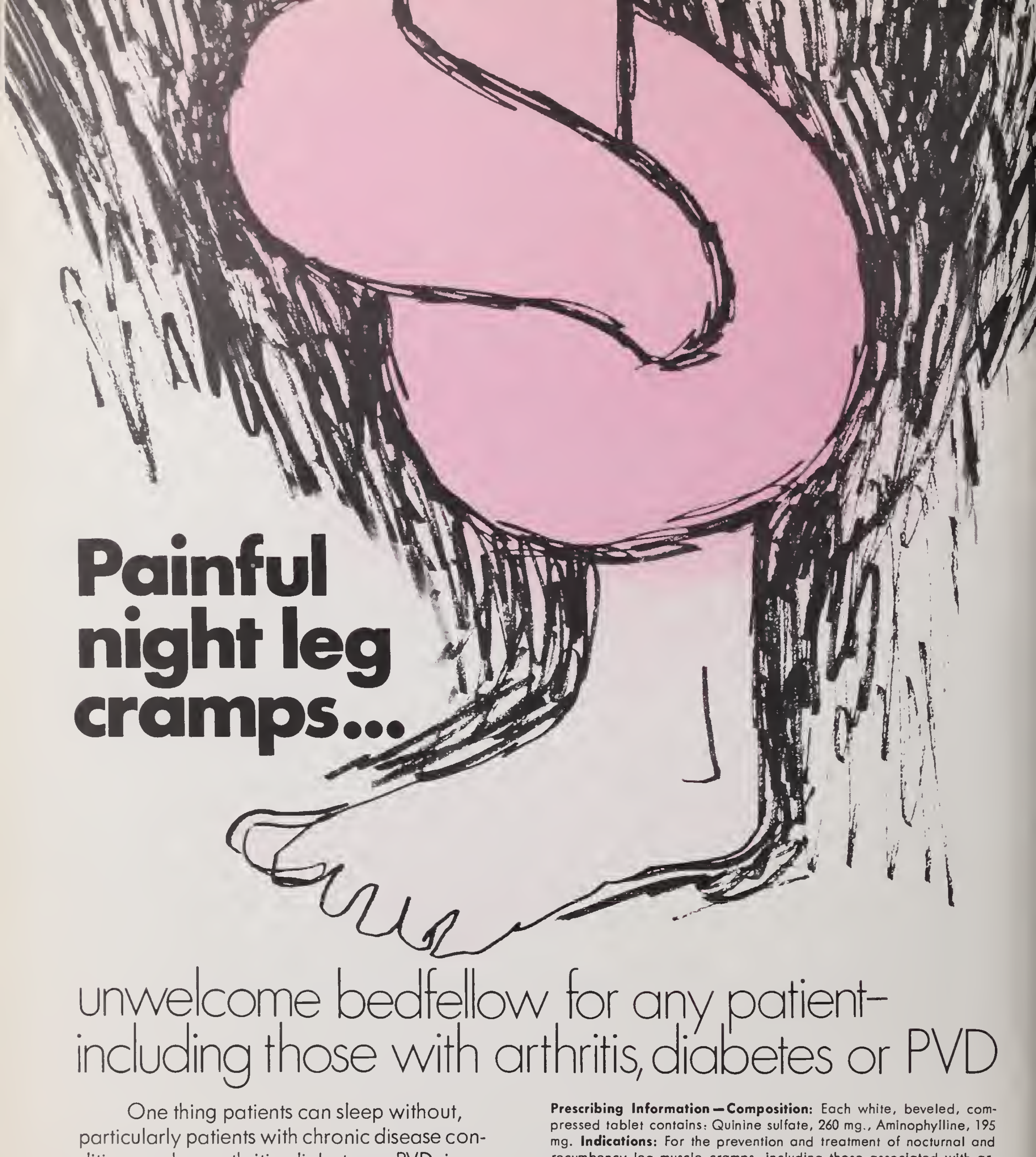
**rning:** Although generally safer than the amphetamines, use with great caution in ients with severe hypertension or severe cardiovascular disease. Do not use dur- first trimester of pregnancy unless potential benefits outweigh potential risks.

**verse Reactions:** Rarely severe enough to require discontinuation of therapy, unpasant symptoms with diethylpropion hydrochloride have been reported to occur elatively low incidence. As is characteristic of sympathomimetic agents, it may asionally cause CNS *effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-107/4/71/U S PATENT NO 3,001,910

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144



# Painful night leg cramps...

## unwelcome bedfellow for any patient–including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

**Prescribing Information—Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**

**Quinamm**™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)

# Make Sure You Have Cash To Live On When You're Disabled!

Even doctors get sick and hurt! When your turn comes and you can't continue your practice, will you still be able to provide for yourself and your family—pay for food, clothing, your home, the everyday living expenses, plus extra medical bills?

You can have this financial security with the Disability Income Protection Plan available to members of the Medical Society of the District of Columbia.

PAYS UP TO $225.00 A WEEK
when you're sick or hurt
and can't practice!

*Check these other important features of this plan:*

- Benefits are TAX-FREE, for you to use as you see fit.
- Confinement is never required during disability.
- Benefits are payable regardless of other coverage.
- There is no automatic age termination.
- Your policy is guaranteed renewable while the program remains in force regardless of benefits paid to you or any future changes in health.
- Premiums are low, due to the mass purchasing power of your Society.
- There are few exceptions. Your policy does not cover: suicide or attempted suicide; loss during a declared or undeclared war or while a member of an armed service; loss due to noncommercial flying; costs of childbirth, pregnancy or any complication.

Fill out the coupon below and mail it today! You'll receive complete information on this outstanding Disability Income Protection Plan available to you as a member of the Medical Society of the District of Columbia. Don't delay!

JOSEPH E. JONES, Administrator
1666 Connecticut Avenue, N.W.
Washington, D.C. 20009 Phone: (202) 483-3100

Please rush to me complete information on the Disability Income Protection Plan available to me as a member of the Medical Society of the District of Columbia!

Name____________________________

Address__________________________

City__________ State_______ ZIP Code_____

Underwritten by

**Mutual of Omaha**®
*The Company that pays*

Life Insurance Affiliate: United of Omaha

MUTUAL OF OMAHA INSURANCE COMPANY
HOME OFFICE: OMAHA, NEBRASKA

anxiety:
a time bomb

Unless "defused," anxiety may build up to an intensity that can overwhelm the patient's inner defenses. Also, in one weakened by chronic illnes or surgery, excessive anxiety may provoke or aggravate symptoms and interfere with recovery.

The antianxiety action of Librium (chlordiazepoxide HCl)—used adjunctive or alone—has demonstrated clinical usefulness in many fields of medical practice where anxiety complicates the patient's condition.

antianxiety

Librium®
(chlordiazepoxide HCl)
5-mg, 10-mg, 25-mg capsules
up to 100 mg daily for severe anxiety

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has no been established clinically.

**Adverse Reactions:** Drowsiness ataxia and confusion may occur, especially in the elderly and debilitated. Thes are reversible in most instances by prope dosage adjustment, but are also occasionally observed at the lower dosage ranges In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, mino menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG pattern (low-voltage fast activity) may appea during and after treatment; blood dyscrasias (including agranulocytosis), jaundic and hepatic dysfunction have been reported occasionally, making periodi blood counts and liver function tests advisable during protracted therapy.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche In
Nutley, N.J. 07110

*Volume 40 · Number 6 · June 1971*

# MEDICAL ANNALS of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

**Tuberculin, Diphtheria and Smallpox among Medical Students**
HAROLD H. WHITTED, M.D., MARTIN Y. HESHMAT, M.D.
AND LAWRENCE B. PRATER, JR.

**Hand Grip Diagnosis of Idiopathic Hypertrophic Subaortic Stenosis**
ALBERTO ROTSZTAIN, M.D. AND
PATRICK J. BOWEN, M.D.

**General Highlights of Cardiac Auscultation**
JOSEPH K. PERLOFF, M.D.

**Glomangioma (Glomus Tumor)**
DONALD A. JOHNSON, M.D.

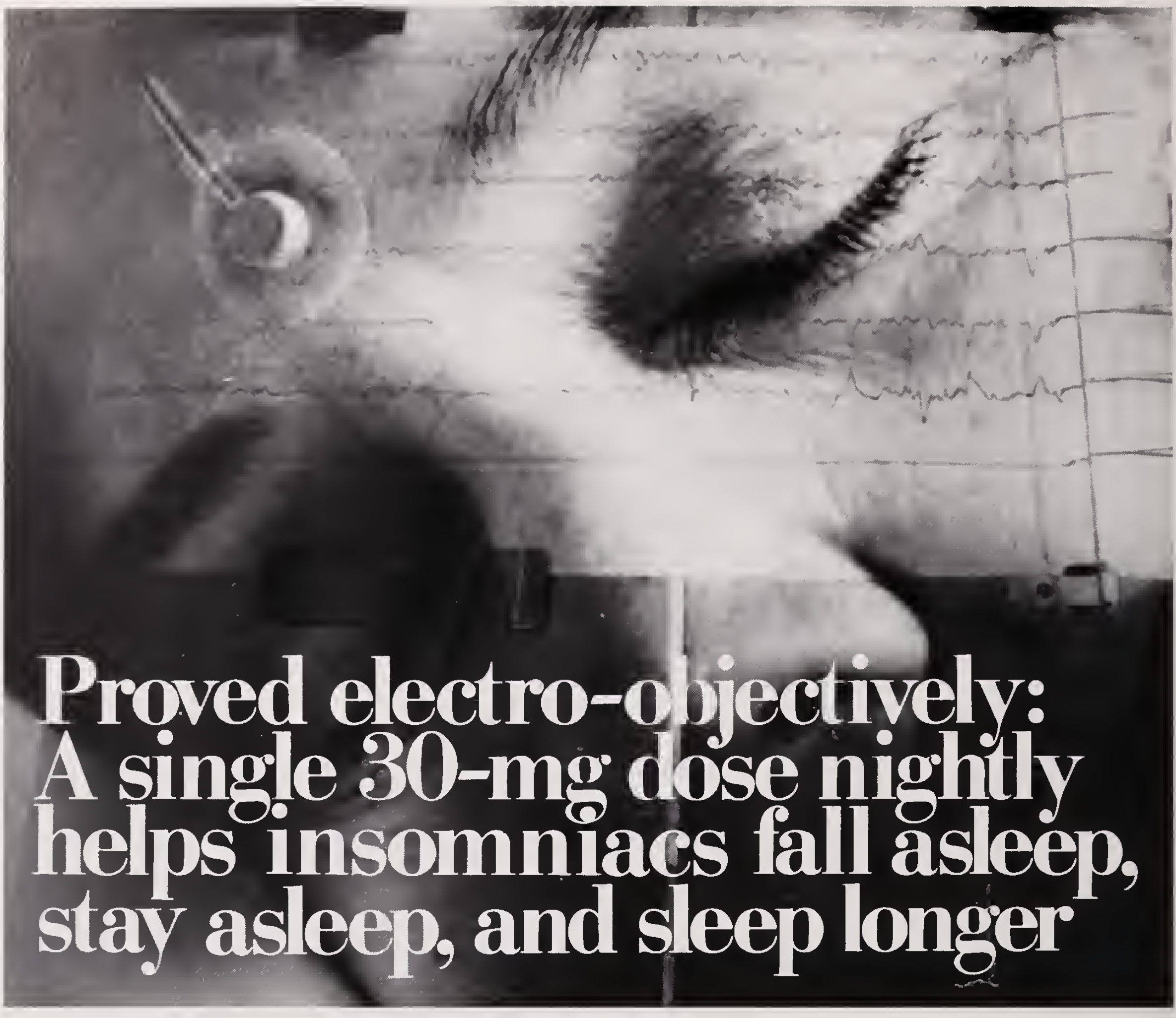
**Osler's Textbook of Medicine**
BENNIE A. MOXNESS, M.D.

**Hepatomegaly of 17 Years Duration: CPC**
CHANDLER SMITH, M.D.

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
16 JUL 1971

Deans of the three area medical schools after receiving checks totaling $23,347 from the AMA for Education Research. Dr. Marvin Korengold (2nd from left) presented the checks to Dr. John Parks, George Washington; Dr. Marion Mann, Howard; and Dr. John Rose, Georgetown.

*Annual Scientific Assembly*
THE STATLER HILTON HOTEL
September 23 & 24, 1971



# Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

**Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro- oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]**

**Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.**

## Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

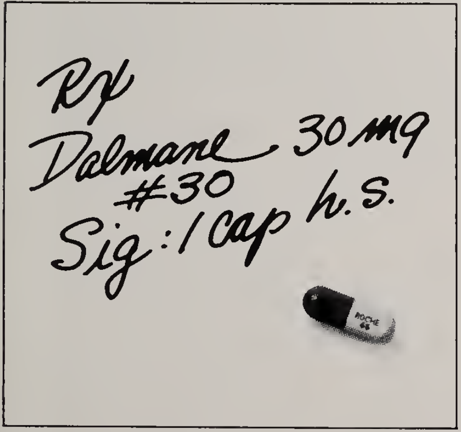
Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

## Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.[3] Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

**References: 1.** Kales, A., *et al.*: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. **2.** Kales, A., *et al.*: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed.): *Sleep: Physiology and Pathology,* Phila., Lippincott, 1969, p. 331. **3.** Data on file, Medical Department, Hoffmann-La Roche Inc.



Rx
Dalmane 30 mg
#30
Sig: 1 cap h.s.

For the sleep your patients need

New **Dalmane®**
(flurazepam hydrochloride)

**Before prescribing, please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

**HEALTH AUTO-DATA, INC.**
4900 Massachusetts Avenue, N.W.
Washington, D.C. 20016
(202) 966–4300

*Serving the Physician
and the Community*

Health Auto-Data, Inc. (HAD), is organized to provide services to physicians to assist them in their daily routines.

Overhead cost may be reduced by having routine work done at the HAD facility.

We prepare a "patient profile" which may save a considerable amount of time. By having selected tests performed and a medical history taken prior to the physician's initial consultation with the patient, the physician finds it easier and less time-consuming to review the patient's history and analyze the test results.

The medical history is self-administered by patients utilizing an automated console. It passively teaches the patient how to report to a physician, again resulting in a time saving for the physician.

Several semi-automated physiological and laboratory tests are performed.

The entire patient-testing procedure only lasts about an hour and a half! HAD does not interpret the tests. HAD concentrates on the efficient and low-cost performance of routine tests.

The computer-printed reports - - with annotations by the patient's physician - - can serve as records to enclose when making referrals. The records with added diagnosis and recommendations can provide a full report when admitting a patient to a hospital. With progress notes regarding hospital treatment and disposition, the material provides the basis for a hospital summary.

Appointments for patients may be made at the patients' convenience. Call 966–4300 for further information or clip out this form and mail to:

HEALTH AUTO–DATA, INC.
4900 MASSACHUSETTS AVENUE, N.W.
WASHINGTON, D.C. 20016

FROM: DR. ____________________

STREET ADDRESS ____________________

CITY ____________________ STATE __________

ZIP CODE ____________________

TELEPHONE NUMBER ____________________

- ☐ SEND LISTING OF SERVICES AND FEES
- ☐ HAVE A REPRESENTATIVE CALL FOR APPOINTMENT TO EXPLAIN SERVICES
- ☐ I AM INTERESTED IN A FIRST-HAND INSPECTION OF H A D - - CALL ME TO ARRANGE A VISIT
- ☐ I AM INTERESTED IN BEING PROCESSED THROUGH H A D FACILITY - - CALL ME TO ARRANGE AN APPOINTMENT SO I CAN INCLUDE YOUR SERIES OF TESTS IN MY ANNUAL PHYSICAL EXAMINATION. I UNDERSTAND THIS IS COMPLIMENTARY

VOLUME 40 • JUNE 1971

**EDITOR**

Wallace M. Yater, M.D.

**ASSISTANT EDITOR**

Judith E. Perruso

**MANAGING EDITOR**

Francisco P. Ferraraccio

**EDITORIAL BOARD**

Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**

Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Frank S. Bacon, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

# MEDICAL ANNALS of the DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

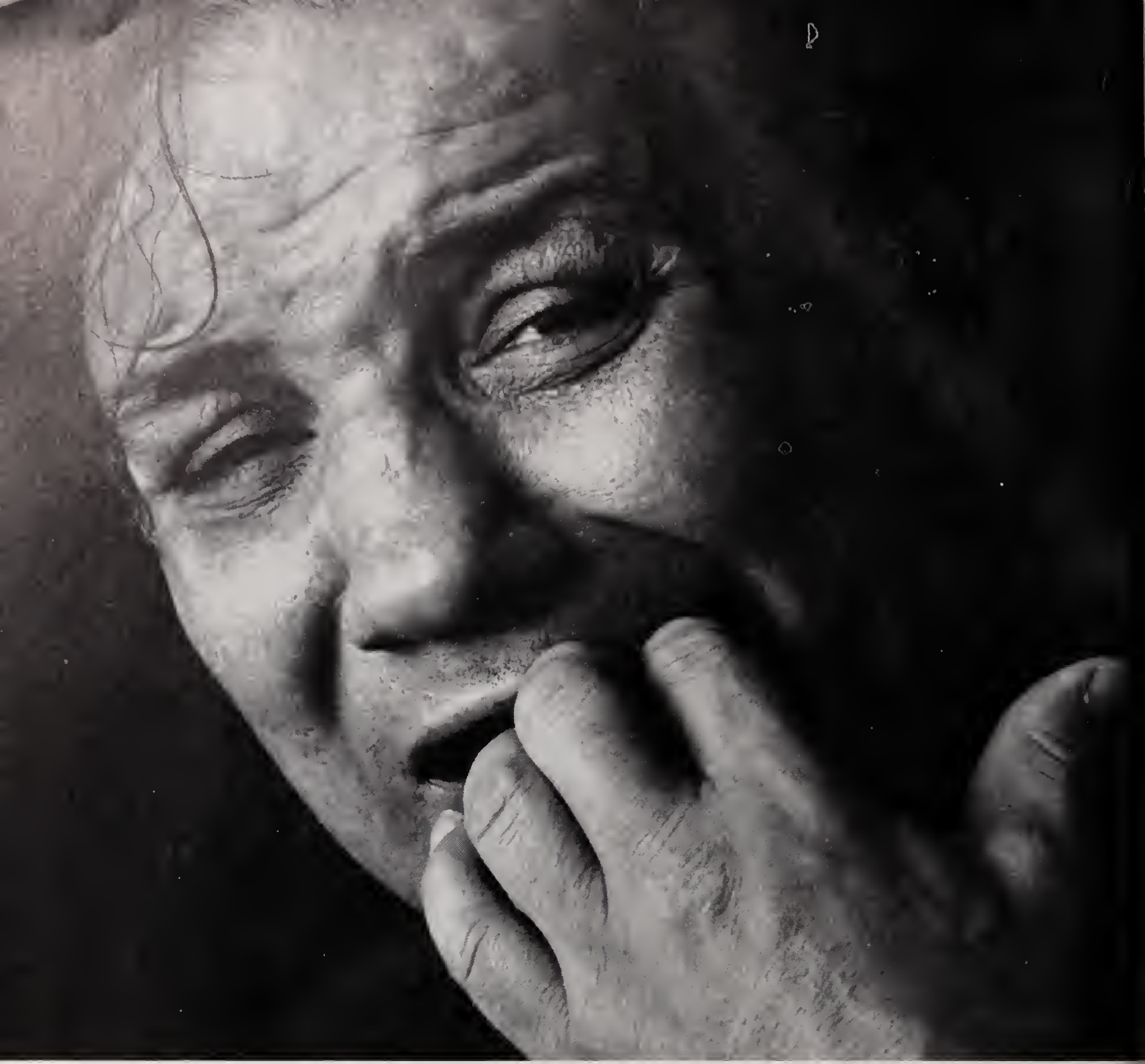
**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.



DU-7019

# Who's afraid of the big bad enema?

**We all are.** But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can — except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents" and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

**Dulcolax®...it's predictable**
bisacodyl

GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 UNDER LICENSE FROM BOEHRINGER INGELHEIM G. M. B. H.

**MEDICAL ANNALS**
**of the District of Columbia**

## *Contents for June*

### SCIENTIFIC ARTICLES

Reaction to Tuberculin, Susceptibility to Diphtheria and Immunity Against Smallpox among Medical Students over a Decade. *Harold H. Whitted, M.D., M.P.H., F.A.C.P.M.*, *Martin Y. Heshmat, M.D., Dr.P.H., F.A.C.P.M.*, and *Lawrence B. Prater, Jr., B.S.*, Washington, D.C. 361

The Use of Isometric Tension (Hand Grip) in the Bedside Diagnosis of Idiopathic Hypertrophic Subaortic Stenosis (IHSS). *Alberto Rotsztain, M.D.* and *Patrick J. Bowen, M.D.*, Washington, D.C. 367

General Highlights of Cardiac Auscultation. *Joseph K. Perloff, M.D.*, Washington, D.C. 369

Glomangioma (Glomus Tumor): Report of Case with 50-Year History. *Donald A. Johnson, M.D., Ph.D.*, Washington, D.C. 372

Osler's Textbook of Medicine. *Bennie A. Moxness, M.A., M.D.*, Chevy Chase, Maryland 375

Clinicopathologic Conference: Hepatomegaly for 17 Years in a 65-Year-Old White Man. *Chandler Smith, M.D.*, Washington, D.C. 380

### SPECIAL SECTION

History of the Medical Society of the District of Columbia. Chapter XIII. *Theodore Wiprud* 393

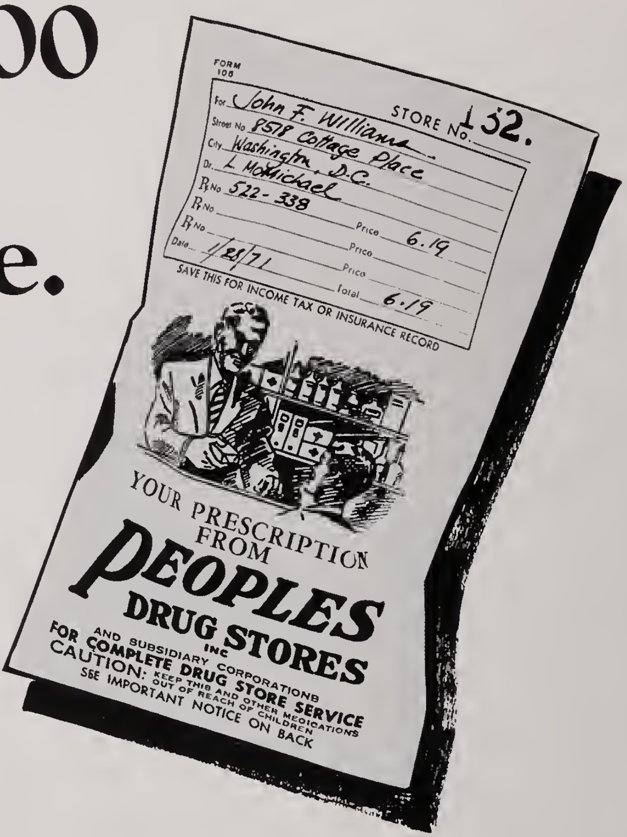
### MISCELLANY

President's Page: "Victims of Rape" 384
Summary of the Executive Board Actions 397
D.C. Health Notes 403
New Members 404
D.C. Mental Health Administration 405
1971 Phillip Burka Awards 407
Book Reviews 409
DOCPAC Briefs 412
National & Regional Meetings 412
General News 413
Obituaries 417
*Medical Annals Staff and Officers of the Medical Society* Adv. 3
*Classified Advertisements* Adv. 9
*Index of Advertisers* Adv. 10

---

Copyright ©, 1971 by The Medical Society of the District of Columbia. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

The bag that has earned more than 125,000,000 votes of confidence.


FORM 108
For John F. Williams STORE No. 132.
Street No 8518 Cottage Place
City Washington, D.C.
Dr. L. McMichael
℞ No 522-338
℞ No
℞ No Price 6.19
Date 1/28/71 Price
Price
Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD
YOUR PRESCRIPTION FROM
PEOPLES
DRUG STORES INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®
PRESCRIPTION DRUG STORES

WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.

WHEN TRAUMA RESULTS IN PAIN...

graph
mplies
ement
c
math

esic . . . provides effective analgesia and relief of associated muscle spasm

**Contraindications:** Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.

Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).

**Warnings:** USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.

**Precautions:** It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.

**Adverse Reactions:** Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established. **Dosage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

**Riker Laboratories, Inc.**
NORTHRIDGE, CALIFORNIA 91324

A SUBSIDIARY OF 3M COMPANY

**NORGESIC®**
(orphenadrine citrate, 25 mg., aspirin, 225 mg., phenacetin, 160 mg., caffeine, 30 mg.)

**the versatile analgesic**

Now
available for your
prescribing
needs

Cordran® Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206
000121

Lilly

MEDICAL ANNALS
of the District of Columbia

*June 1971*
VOLUME 40 • NUMBER 6

# Reaction to Tuberculin, Susceptibility to Diphtheria and Immunity Against Smallpox Among Medical Students Over a Decade

HAROLD H. WHITTED, M.D., M.P.H., F.A.C.P.M. *,
MARTIN Y. HESHMAT, M.D., DR.P.H., F.A.C.P.M.† AND
LAWRENCE B. PRATER, JR., B.S. ‡

WHEN WE EXAMINE our immunization practices it becomes evident that our main effort has been toward children. From a community point of view, certain gaps in our protection have been allowed to remain, and when infectious disease is introduced into a susceptible population it can produce devastating results. In the light of this, a 10-year review of the immunization status of the sophomore medical classes at Howard University College of Medicine was done.

During the period 1960 to 1969 the Department of Community Health Practice at Howard University gave tuberculin and Schick tests and smallpox vaccine to 697, 695, and 811 students respectively. For the 10 years combined the composition of student bodies subjected to each of these procedures did not vary much with regard to age, sex, race and birthplace. The median age varied from 25.5 to 26.0 years, and the percentage of males, nonwhites and U.S.-born students were 85.5 to 85.8, 86.7 to 88.3 and 79.5 to 80.1 respectively. This paper presents the findings with regard to tuberculosis infection, susceptibility to diphtheria and degree of immunity against smallpox in this predominantly nonwhite community.

## Tuberculosis

An estimate of tuberculosis infection, as measured by tuberculin skin-testing in young adult Negro population in the U.S. during the sixties, is not easy to arrive at. One credible source of data is the Tuberculosis Program of the U.S. Public Health Service which tested more than half a million Navy recruits (26,000 Negroes) and 14,000 college students (264 Negroes) during the period 1958 to 1964. The median age of Navy recruits was 18.5 and of the college students, 18.8 years. Tuberculin-reaction rate for white Navy recruits was 4.1%, and for white college students, 3.0%. Corresponding figures for Negroes in the 2 groups were 12% and 18% respectively.[1]

Trends of tuberculosis infection rates among medical students from the thirties to the early sixties have been studied by several investigators. Maha[2] at the University of Illinois reported a reaction rate of 8% for white freshman medical students in 1962. This value is about the same as that reported for 1958-1959 by Smith and associates[3] who surveyed second-year medical students at Duke University. However, these 2 authors and others who conducted similar surveys did not give separate figures for Negro students. Khoury and his co-workers,[4] who tested 5,000 residents of a predominantly Negro census tract in Washington, D.C. in 1968, reported tuberculin-reaction rates of 8.2%, 20.9% and 28.7% for age groups 20-24, 25-29 and 30-34 respectively.

This paper revealed some facts concerning the trends of tuberculosis infection primarily among Negro medical students at Howard University. Student participants took either the multiple-puncture Tine test or the Mantoux intradermal test using the intermediate dose of P.P.D.-S (5 T.U.) for the later test. An area of induration of 2 mm or more around 1 or more puncture sites was interpreted as a positive reaction to the Tine test. An area of induration of 10 mm or more was considered to be a positive reaction to the Mantoux test. Nonwhites comprised 87.9% of all the students who took the test. ABout 75% of nonwhite students were Negroes born in the U.S.

Table 1 shows that for all years combined the infection rate among the youngest age group (below

---

* Acting Chairman, Department of Community Health Practice, Howard University College of Medicine, 520 W Street, N.W., Washington, D.C. 20001.

† Associate Professor, Department of Community Health Practice, Howard University College of Medicine.

‡ Senior Student, Howard University College of Medicine.

TABLE 1: Percentage of Tuberculin-Positive Students By Age, Sex, Race, and Birthplace, 1960–1969*

| | 1960 | 1961 | 1962 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Age: | | | | | | | | | | |
| Below 24 | 26.7 | 19.4 | 12.5 | 11.1 | 11.1 | 8.0 | 5.9 | 8.3 | 5.9 | 12.8 |
| 24–26 | 31.6 | 38.1 | 33.3 | 11.1 | 22.7 | 9.1 | 13.0 | 12.0 | 13.0 | 19.3 |
| 27–29 | 33.3 | 42.1 | 42.1 | 38.5 | 29.6 | 26.1 | 23.1 | 16.7 | 10.0 | 31.1 |
| 30 and over | 46.2 | 50.0 | 50.0 | 46.2 | 33.3 | 18.8 | 33.3 | 18.2 | 28.6 | 36.7 |
| Sex: | | | | | | | | | | |
| Male | 34.7 | 32.1 | 38.6 | 21.2 | 25.7 | 17.6 | 16.7 | 12.7 | 14.0 | 24.0 |
| Female | 18.2 | 50.0 | 11.1 | 40.0 | 0 | 4.3 | 7.7 | 9.1 | 0 | 12.1 |
| Race: | | | | | | | | | | |
| White | 28.6 | 30.0 | 16.7 | 5.9 | 0 | 12.5 | 11.1 | 0 | 0 | 11.9 |
| Nonwhite | | | | | | | | | | |
| U.S.-born† | 31.8 | 30.4 | 31.5 | 25.6 | 18.2 | 14.5 | 11.4 | 12.8 | 12.5 | 21.8 |
| Foreign-born†† | 40.0 | 54.5 | 40.0 | 36.4 | 50.0 | 15.4 | 23.5 | 14.3 | 15.8 | 30.5 |
| Total nonwhite | 32.9 | 33.8 | 33.3 | 27.8 | 26.0 | 14.6 | 14.4 | 13.3 | 11.8 | 23.8 |
| Total | 32.5 | 33.3 | 32.0 | 22.5 | 24.0 | 14.4 | 13.9 | 12.5 | 12.3 | 22.2 |

* No data available for 1963.

† 99 % of nonwhites born in U.S. were Negroes.

†† Only 2 out of 143 foreign-born students who took the test were whites.

24) was about the same as the value reported for Navy recruits in spite of the differences in age between the 2 groups. In our opinion this similarity is a result of 2 opposing forces. The first is the higher age of medical students which tends to increase reaction rate among them. The second is the recency and presence of females in our study, which tend to decrease that rate in conformity with the national tuberculin-reaction patterns. Recency of our study may be one of the reasons why our students below 24 years of age had a lower reaction rate than that reported for Negro college students by the Tuberculosis Program in the U.S. Public Health Service. Infection rates reported by Khoury were higher than ours for 1968 because he conducted his survey in a low-income slum area.

Total figures for each year in table 1 indicate that apart from 1961, the percentage of students infected with the tubercule bacillus showed a continuing decline from 32.5 in 1960 to 12.3 in 1969. This downward trend occurred also among Negro students (American-born nonwhites). The percentage of positive reactors among foreign-born students varied from year to year without any consistent pattern. The table shows also that year after year the percentages of positive reactors were consistently higher for older age-groups, males, nonwhites and foreign-borns than for their counterparts. Figures for the 9 years combined reveal that the age-group 30 years and over had about 3 times as many positive reactors as that below 20 years. Males had twice the rate of females, and nonwhites had twice the rates of whites. Percentages of reactors among whites for individual years are not representative because of the small number of students tested. However, the total for all years is meaningful.

The median age of students who took the test did not change from year to year. It ranged between 25.6 and 26.2 years. However, male/female, white/nonwhite, and U.S.-born/foreign-born ratio varied significantly from year-to-year as documented in table 2. The data show that for most years disproportionately larger numbers of males, nonwhites, foreign-borns which would increase the percentage of positives in a particular class might have been counter-balanced by predominance of students in 1 or more groups of low tuberculin-reactor rates (females, whites and U.S.-born) in the same class. Nevertheless, the authors thought that the real trend

TABLE 2: Male/Female, Nonwhite/White, U.S.-Born/Foreign-Born Ratio Among Tuberculin Tested Students 1960-1969*

| | Male/ Female | U.S.-born/ Foreign-born | Nonwhite/ White |
|---|---|---|---|
| 1960 | 6.5 | 6.5 | 10.9 |
| 1961 | 14.0 | 7.2 | 8.9 |
| 1962 | 3.2 | 4.0 | 11.5 |
| 1964 | 13.2 | 5.4 | 3.2 |
| 1965 | 14.8 | 3.4 | 12.2 |
| 1966 | 3.2 | 2.6 | 11.2 |
| 1967 | 5.1 | 3.6 | 3.4 |
| 1968 | 5.0 | 3.7 | 10.0 |
| 1969 | 7.1 | 2.0 | 8.5 |
| Total | 6.0 | 3.9 | 7.3 |

* No data available for 1963.

for tuberculosis infection in the decade of the study could be known only after adjusting the figure for sex, race, and birthplace. Adjustment for age was not necessary because median age of students did not vary much from year-to-year.

Figure 1 illustrates the smooth decline of the percentage of tuberculin-reactors from 33.2 in 1960 to 12.0 in 1969. Tuberculin-testing is 1 of the major tools for the screening of medical personnel for tuberculosis infection. This study shows that the usefulness of the test has increased significantly. Whereas in 1960 the test could be used by 66.8% of the students, in 1969 as many as 88% of them could use it.

## Diphtheria

Morbidity and mortality from diphtheria in the U.S. decreased during the first 30 years of this century but fell much more dramatically during the thirties, forties and fifties because of routine use of diphtheria toxoid in infancy and childhood. In 1932, for example, morbidity and mortality rates per 100,000 population were 40 and 4 respectively. The corresponding figures for 1959 were 0.5 and 0.04.[5,6] Had this rate of decline continued in the sixties, we would have reached virtual eradication of the disease in this country. Instead, the attack rates and deaths declined much more slowly in the period 1960-65.

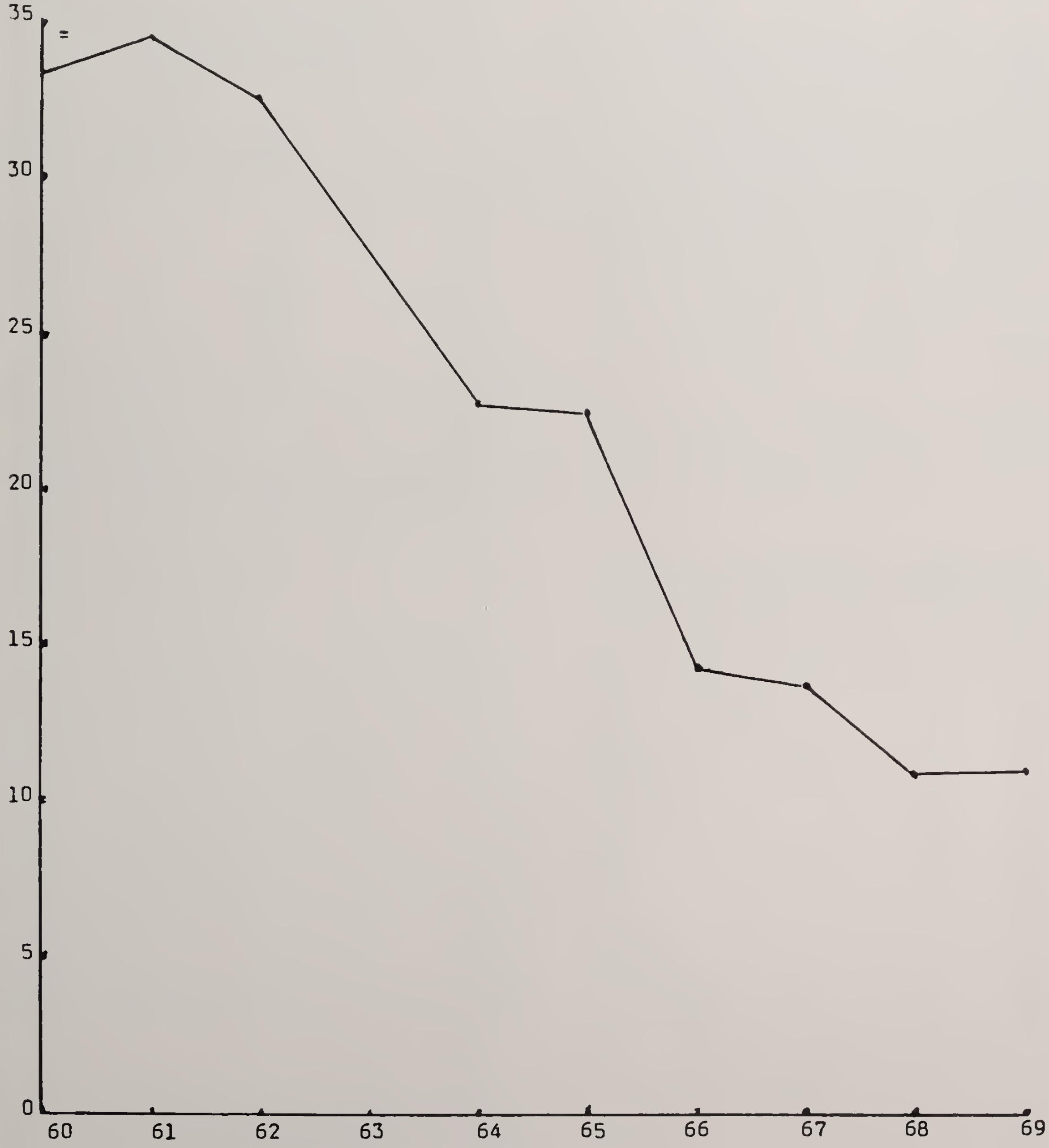


FIG. 1. Percentage of Positive Tuberculin Reactors After Adjustment by Sex, Race and Birthplace (1960–1969)

After 1965 the overall downward trend since 1927 reversed itself, and cases and deaths increased from 164 and 18 respectively in 1965 to 214 cases and 22 deaths in 1969.[6] Figure 2 illustrates the rise of diphtheria incidence curve since 1965.

It seems that the earlier achievement in diphtheria prevention has shifted the concern of the medical profession to more pressing public health matters. In addition, the Vaccination Assistance Act which provided funds to states for vaccination programs was allowed to expire in June 30, 1968 and was not extended, thereby cutting off needed funds for these programs. This unfortunate incident may be responsible for the sharp rise of the curve in figure 2 after 1969.[7]

Even with the advent of potent antibiotics, antitoxin, and specialized care for diphtheria, the case fatality ratio has remained remarkably constant since the late forties. We believe that this is due at least partially to decline in clinical discernment and inadequate use of laboratory facilities for early diagnosis. Cases are discovered unduly late, and specific treatment is often begun after extensive damage to the heart and kidney from the circulatory exotoxin. Sharp localized epidemics continue to appear accompanied by serious complications and a case fatality ratio often greater than 10%. The epidemic in San Antonio, Texas, which involved 96 cases is but 1 example.[8]

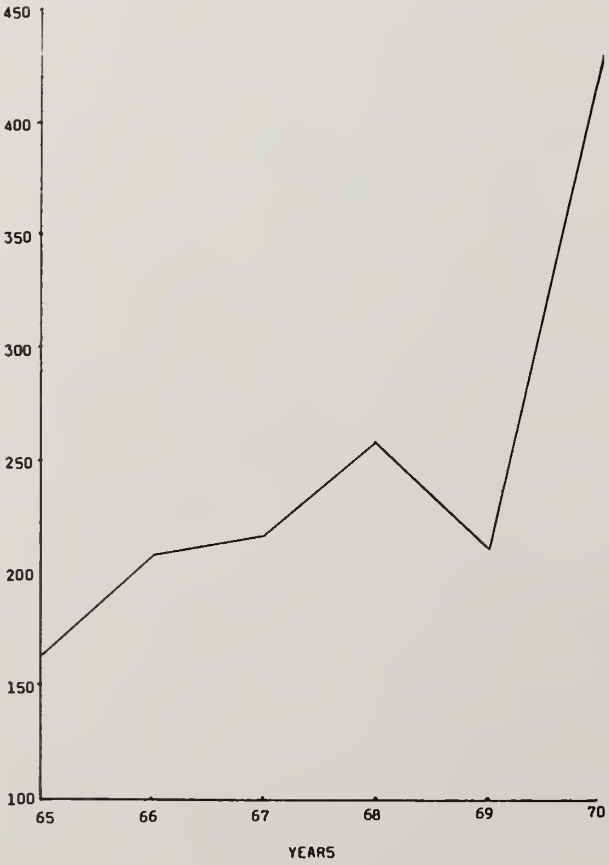


FIG. 2. Number of Reported Cases of Diphtheria in the United States 1965–1970

Diphtheria thus remains a constant menace in this country. The Department of Community Health Practice at Howard University, being aware of this state of affairs, has been testing the sophomore medical students and immunizing the susceptibles since 1960. The results of testing presented in table 3 show that about one-fifth of the class was susceptible to diphtheria. Apart from age 30 and over, various age-groups showed almost the same degree of susceptibility. Females were more susceptible than males and Negroes more than whites. Examination of positive reactors for the 9 years of the study separately reveals that this was a uniform finding in all the years as documented in table 4. As for birthplace, U. S. born students were more susceptible than foreign borns. The higher degree of immunity among the latter group may have resulted from either greater chances of exposure to diphtheria or compulsory vaccination in countries of origin. Table 4 shows also that the % of susceptibles fluctuated from year to year without apparent trend of increase or decrease.

**TABLE 3: Number and Per cent of Schick-Positive Students for the 9 Years Combined by Age, Sex, Race and Birthplace, 1960–1969**

| | Number Tested | Number of Positive Reactors | Percent Positive Reactors |
|---|---|---|---|
| Age: | | | |
| Below 24 | 223 | 48 | 21.5 |
| 24–26 | 223 | 47 | 21.1 |
| 27–29 | 140 | 28 | 20.2 |
| 30 and over | 109 | 31 | 28.4 |
| Sex: | | | |
| Male | 594 | 122 | 20.5 |
| Female | 101 | 32 | 31.7 |
| Race: | | | |
| White | 90 | 16 | 17.8 |
| Nonwhite | | | |
| U.S.-born* | 473 | 115 | 24.3 |
| Foreign-born | 132 | 23 | 17.4 |
| Total Nonwhite | 605 | 138 | 22.8 |
| Total | 695 | 154 | 22.1 |

* Negroes.

For the country as a whole, 10-15 % of cases of diphtheria occur in the age-group 20 years and over. In the recent San Antonio epidemic about 10 % of cases

TABLE 4: Percentage of Schick-Positive Students by Sex and Race 1960–68

| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Sex: | | | | | | | | | | |
| Male | 15.7 | 17.4 | 21.4 | 30.1 | 17.3 | 10.3 | 35.1 | 16.1 | 16.0 | 20.2 |
| Female | 28.6 | 50.0 | 52.9 | 57.1 | 40.0 | 17.4 | 60.0 | 18.2 | 20.0 | 31.7 |
| Race: | | | | | | | | | | |
| White | 12.5 | 9.1 | 20.0 | 26.3 | 15.4 | 11.1 | 37.5 | 16.7 | 9.1 | 17.8 |
| Nonwhite | | | | | | | | | | |
| U.S.-born* | 18.2 | 20.0 | 34.0 | 33.3 | 22.2 | 13.6 | 44.5 | 15.7 | 21.7 | 24.3 |
| Foreign-born† | 16.7 | 27.3 | 13.3 | 15.4 | 10.5 | 15.4 | 26.7 | 30.7 | 7.1 | 17.4 |
| Total Nonwhite | 18.0 | 21.0 | 29.4 | 34.4 | 19.2 | 12.0 | 39.0 | 18.0 | 18.3 | 22.8 |
| Total | 17.2 | 19.6 | 28.8 | 32.5 | 18.6 | 11.9 | 38.8 | 17.9 | 16.9 | 22.1 |

* Negroes
† Only 6 out of 138 foreign-born students were white.

came from this age-group. With the effective and safe DT toxioid now available, there is no longer any justifiable reason to deny adults the protection against diphtheria which they enjoyed as children. This protection is mandatory for population groups with high risk of exposure particularly the medical personnel.

## Smallpox

Smallpox remains a highly virulent disease, even with excellent medical care. Mortality among non-vaccinated persons was 40 % both in Sweden and England during the outbreaks of 1962 and 1963. Despite the highest vigilance at ports of international travel an occasional case of smallpox slips through this line of defense and the disease is introduced in non-endemic areas. In the past 18 years there have been 75 such instances.[9]

Hospitals often serve as the focus of spread of imported smallpox. The Communicable Disease Center analyzed 30 epidemics of smallpox in non-endemic areas during the period 1940-1965 and reported that over half of the cases (300 of 516) occurred as a result of spread of the disease in hospitals. Twenty-five physicians and 35 nurses developed the disease; many of them died. It is quite possible that similar outbreaks may take place in the United States.[10]

This alarming and distressing situation prompted the American Hospital Association to approve a "National Program for the Vaccination of Hospital Workers Against Smallpox" in 1965. The impact of this program on the immunity status of medical students across the nation is not known.

The situation at Howard University College of Medicine during the past decade was evaluated by the Department of Community Health Practice. Eight hundred and eleven students were vaccinated against smallpox. The number of those showing primary, vaccinoid, and immune reactions were 54, 221 and 536 respectively. The percentage of student in each category varied from year to year with no apparent trend toward increase or decrease throughout the period of the study. Furthermore, there was no consistent correlation between type of reaction and age, sex, race, or birthplace year after year. Table 5 presents the percentage of students showing various types of reaction to the vaccine for all years combined.

Percentage of immunes was higher for males than for females, and for non-whites than whites. One striking finding is that the percentage of students who had partial or complete loss of immunity was

TABLE 5: Percentage of Students Showing Primary, Vaccinoid and Immune Reactions to Smallpox Vaccine by Age, Sex, Race and Birthplace 1960–1969

| | Primary | Vaccinoid | Immune |
|---|---|---|---|
| Age: | | | |
| Below 24 | 5.7 | 30.4 | 63.9 |
| 24–26 | 9.1 | 24.7 | 66.2 |
| 27–29 | 3.7 | 23.3 | 73.0 |
| 30 and over | 7.4 | 31.1 | 61.5 |
| Sex: | | | |
| Male | 6.3 | 26.7 | 67.0 |
| Female | 8.5 | 30.8 | 60.7 |
| Race: | | | |
| White | 7.2 | 35.1 | 57.7* |
| Nonwhite | | | |
| U.S.A.† | 6.8 | 24.4 | 68.8* |
| Non-U.S.A. | 6.4 | 30.9 | 62.7 |
| Total Nonwhite | 6.6 | 26.0 | 67.4 |
| Total | 6.8 | 27.3 | 67.4 |

* Chi square = 4.58 $P < 0.05$
† Negroes

significantly higher among whites than among Negroes. Current knowledge falls short of adequate explanation of this difference. This matter needs further investigation. For all those who were vaccinated, 6.8 per cent had practically no immunity against smallpox, and 27.3 per cent lost part of the protection they had gained from previous vaccination. The first figure does not vary much from that obtained by surveys done in several hospitals in 1964 and 1965 when it was found that interns and residents grossly lacking profection (not vaccinated within 15 years from time of survey) were 5.5% of the house officers studied.[11]

## Summary

Six hundred and ninety-seven tuberculin tests, 695 Schick tests, 811 smallpox vaccinations were given to sophomore students at Howard University College of Medicine during the period 1960-69.

Search of the literature revealed very limited data relevent to trends of tuberculin- reaction rates among Negro college students during the sixties. Our study showed that the percentage of Negro students infected with the tubercle bacillus declined from 31.8% in 1960 to 12.5% in 1969. Year-after-year the percentage of positive reactions was higher for older age-groups, males, non-whites and foreign-borns than for females, whites and American-borns.

Susceptibility to diphtheria among Negro students as indicated by positive reaction to Schick tests ranged from 13.6 to 44.5, with an overall rate of 24.3%. Females were more susceptible than males, and non-whites more than whites.

Of the 811 students vaccinated against smallpox, 6.8% had practically no immunity and 27.3% had lost part of the protection received from previous vaccinations. There were more immunes among Negroes than among whites.

Negro physicians are at higher risk of exposure to tuberculosis and diphtheria than their white counterparts because they have more contact with the non-white population which experiences a tuberculosis attack rate 3 times and a diphtheria attack rate 7 times as high as that for whites. Imported smallpox is an ever-existing occupational hazard to physicians and other hospital personnel. These facts coupled with our findings that over one-fifth of our students were susceptible to diphtheria and over one-third of them had partially or completely lost their immunity against smallpox, should put the administrators of medical schools on the alert to insure adequate protection of students against these diseases. They should also instill in them the value of having tuberculin skin-tests periodically and the importance of maintaining appropriate levels of immunity against smallpox and diphtheria throughout their professional careers.

## References

1. LOWELL, M., EDWARDS, L., and PALMER, C.: Tuberculosis. Cambridge, Massachusetts: Harvard University Press, 1969.
2. MAHA, G.: J.A.M.A., 1962, 182, 304.
3. SMITH, D., JOHNSTON, W., CAIN, I., SCHUMACHER, M.: Amer. Rev. Resp. Dis., 1961, 83, 213.
4. KHOURY, S., THEODORE, A., and PLATTE, V.: Amer. Rev. Resp. Dis., 1969, 99, 345.
5. Vital Statistics-Special Reports. National Office of Vital Statistics. Diphtheria Death Rates by Age, Race and Sex, United States, 1900-1953. 43: No. 6, May 18, 1956.
6. Morbidity and Mortality Weekly Report. National Communicable Disease Center, Atlanta, Georgia. Annual Supplement-Summary 1969. December 1970.
7. Measles Memo and Eradication Progress Report. The Dow Chemical Company, Indianapolis. September 12, 1970.
8. Morbidity and Mortality Weekly Report. National Communicable Disease Center, Atlanta, Georgia. 19:347, 1970.
9. PASSERI, A., and SHINNICK, T.: J.A.H.A., 1968, 42, 115.
10. MILLAR, J.: Ann. Intern. Med., 1967, 66, 1289.
11. SIDEL, V., and BONNANO, R.: J.A.H.A., 1966, 40, 54.

# The Use of Isometric Tension (Hand Grip) in the Bedside Diagnosis of Idiopathic Hypertrophic Subaortic Stenosis (IHSS)*

ALBERTO ROTSZTAIN, M.D. AND PATRICK J. BOWEN, M.D.

SUSTAINED MUSCULAR CONTRACTION of any type can produce through a reflex mechanism a significant increase in systemic blood pressure (Lind, 1964).[1] This increment in blood pressure appears to be related to the duration and intensity of the isometric contraction, while the quantity of muscle involved seems to be of less importance (Lind, 1970).[2] A hand grip that utilizes 30% of the maximum isometric tension can produce a significant pressor response. We report herein the use of this maneuver as an adjunct to the bedside diagnosis of idiopathic hypertrophic subaortic stenosis (IHSS).

## Report of Case

A 50-year-old white man was known to have a history of exertional dyspnea, palpitations and dizzy spells for many years. Pertinent physical findings were a regular bisferiens pulse and blood pressure of 130/80. A sustained left ventricular impulse was noted on palpation. There were a Grade III/VI ejection systolic murmur heard best over the apical area with radiation to the base of the heart and a Grade II/VI pansystolic high-frequency murmur heard best at the apex and radiating to the axillary area. A soft atrial sound was also noted. Cardiac catheterization and left ventricular cineangiography confirmed the diagnosis of IHSS.

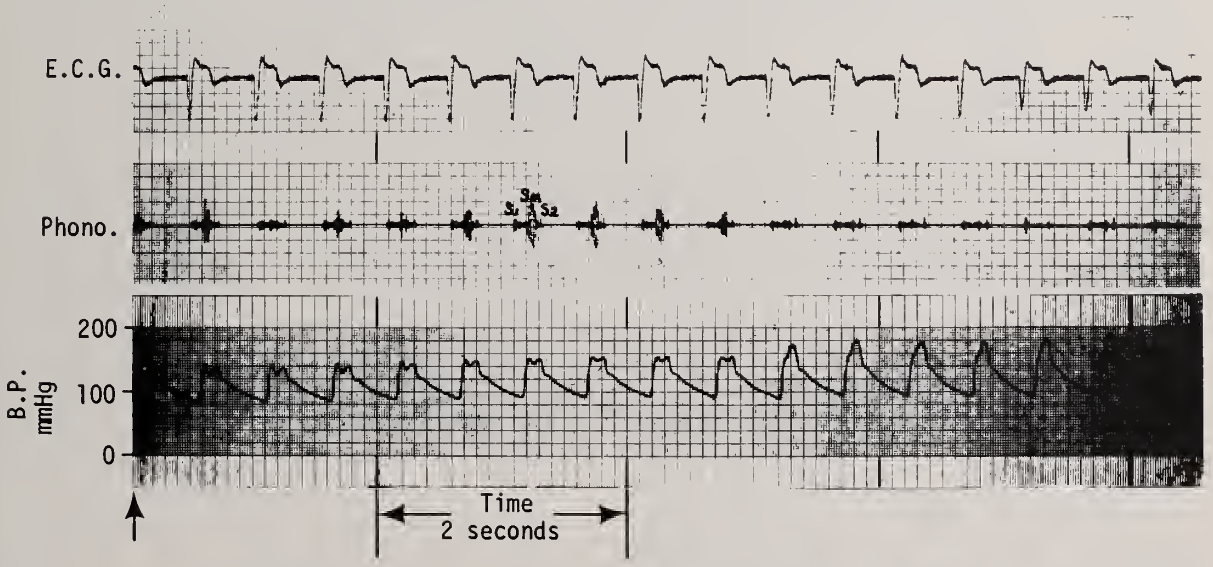


FIG. 1. Simultaneous electrocardiogram, phonocardiogram and intra-arterial (brachial) pressure recording before and during hand grip. Vertical arrow indicates the beginning of isometric contraction (for description see text).

An intra-arterial Teflon needle was inserted into the left brachial artery, connected to a pressure transducer and recorded with a phonocardiogram on a Sanborn recorder. The response to a sustained hand grip is shown in figure 1. Following a delay of 5 seconds the characteristic bisferiens pattern changed

---

* From the Cardiology Section, Medical Service, Veterans Administration Hospital and Georgetown University School of Medicine, 3900 Reservoir Road, N.W., Washington, D.C. 20007.

Address reprint requests to Dr. Alberto Rotsztain, Cardiology Section, Veterans Administration Hospital, 50 Irving Street, N.W., Washington, D.C. 20010.

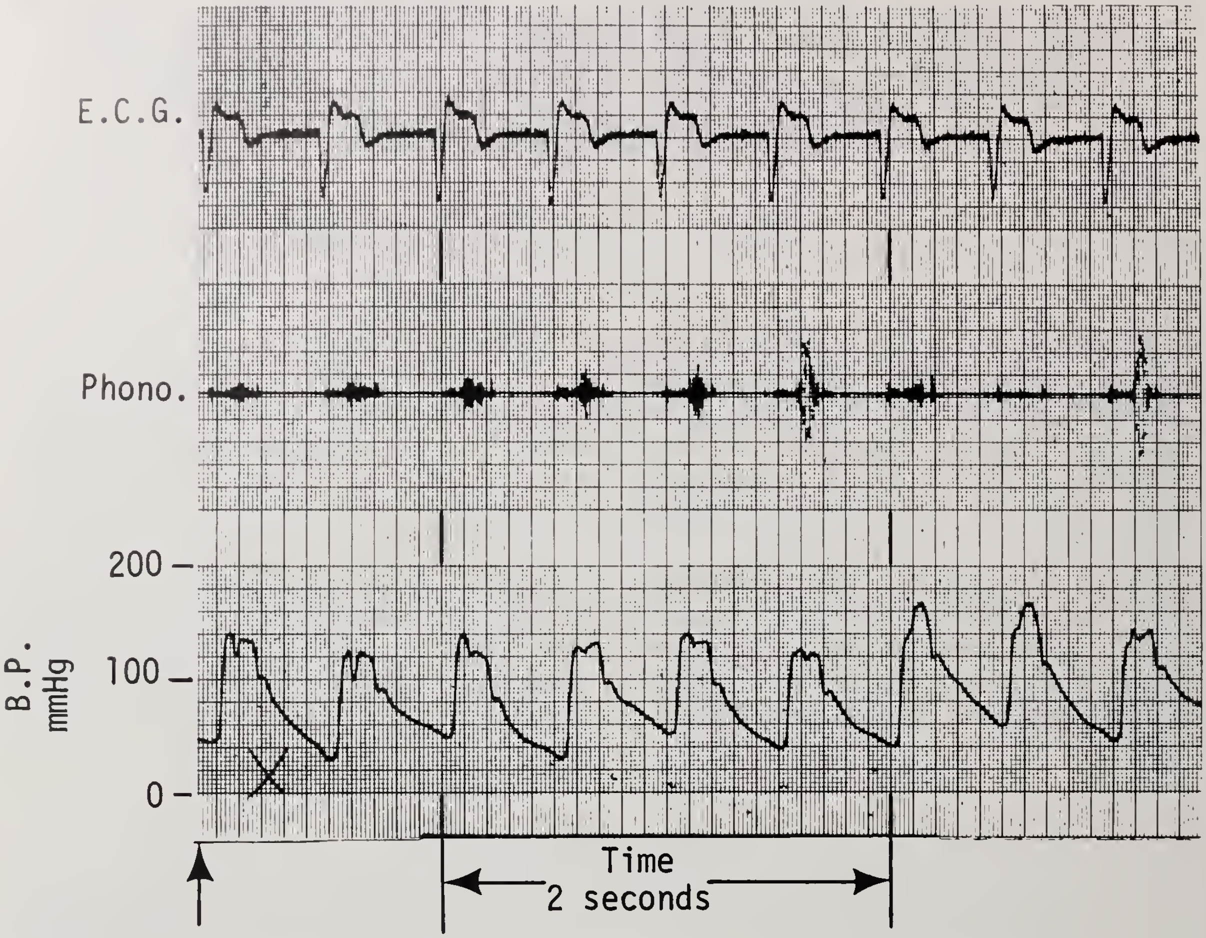


FIG. 2. Indirect external carotid recording replaces intra-arterial pressure recording; the remainder of the study is similar to Fig. 1.

to a normal pulse-curve configuration, and at the same time the systolic murmur almost completely disappeared. The elevation in arterial pressure was of the order of 25 mm Hg, both systolic and diastolic. As soon as the patient released the contraction (not shown on the graphic) the murmur and original pulse curve reappeared. Similar results were obtained with external carotid-pressure recording (figure 2).

Isometric tension raises systemic blood pressure primarily by increasing peripheral vascular resistance. This increase in afterload causes a decrease in gradient in any type of left ventricular outflow obstruction and alters the intensity character of systolic murmurs. However, in IHSS following hand grip, isometric tension results in both diminution in the intensity of the murmur and a striking change in the quality of the arterial pulse. These observations can be made by simultaneous palpation and auscultation and can be documented by phonocardiogram and external pulse recording.

## References

1. LIND, A.R.: The circulatory effects of sustained voluntary muscle contraction. Clin. Sci., 1964, 27, 229.
2. LIND, A.R.: Editorial. Circulation, 1970, 12, No. 2, 173.

# General Highlights of Cardiac Auscultation*

JOSEPH K. PERLOFF, M.D.†

THE PRACTICAL USE of cardiac auscultation requires an understanding of certain elementary principles. First, auscultatory events must be heard before they can be interpreted; accordingly, the technicalities and techniques of auscultation are paramount. Second, recognition of the various heart sounds, especially the first and second sounds, defines systole and diastole and establishes the timing of the different phases of the cardiac cycle. Third, the timing of murmurs can readily be accomplished once the phases of the cardiac cycle are defined. The following remarks will touch on each of these principles.

### Technicalities and Techniques

The chain of success in this area consists of a number of links. The instrument of auscultation is the stethoscope that was introduced by Laennec in 1819. The ideal stethoscope is yet to be devised, but good instruments are available and certain guidelines are useful in their selection. Both a bell and a diaphragm are necessary, the former for the low frequency ranges and the latter for the high. Connecting tubing should be relatively firm and single; double tubes are accoustically less efficient and cause extraneous noise when they touch or rub together. The length of the stethoscope should be about 22 inches. The binaural ear pieces should be relatively large so that they occlude the external auditory canals and do not uncomfortably enter them. Finally, all connections must be airtight in order to avoid loss of sound by leakage.

The next link in the chain is the sensing device, i.e., the human ear which can be trained to sense the broad range of frequencies emanating from the heart and blood vessels. The ear is more efficient than the phonocardiogram in recognizing high frequencies such as the soft murmur of aortic incompetence. The ears are all important since even the best stethoscopes do not amplify sound but merely transmit it to the ears with relatively little loss. Perhaps the most important link in the chain is the interval between the stethoscopic ear pieces, namely, the human brain. The brain interprets what is heard, and in order to do so effectively it must be programmed by years of experience. Once these technical links–the instrument, the sensing device, the interpreter and the programming–are forged, we can turn attention to the auscultatory technique itself.

Auscultation should be conducted in a quiet examining room that is free of ambient noise and that has a temperature so regulated as to avoid shivering. The patient must be relaxed and comfortable and the examiner unhurried. Various postures should be employed such as supine, prone, left lateral decubitus, sitting, leaning forward, standing, or squatting. Respiratory patterns should also be appropriately selected including quiet or arrested breathing for routine auscultation, full-held expiration for the soft murmur of aortic incompetence, or normal or exaggerated respiratory excursions for the behaviour of the second heart sound or for certain right-sided events. Physical and pharmacologic interventions are useful and include coughing, effort, squatting, isometric tension (squeezing the clinched fists), and certain vasoactive drugs especially amyl nitrite and pressor agents. When the bell of the stethoscope is applied with varying degrees of pressure a relatively broad range of frequencies can be elicited. When the bell is touched lightly to the skin low frequencies are heard (soft third heart sound); when high frequencies are paramount, firm pressure with the diaphragm is required. Palpation should precede auscultation so that the stethoscope can be placed precisely at the most appropriate precordial sites. Finally, auscultation should not be confined to the precordium but should include the right side of the chest, axillae, back, neck, flanks, abdomen, groins, and at times the eyeballs and skull.

### The Heart Sounds

The normal heart sounds define the phases of the cardiac cycle and serve as standards by which abnormal heart sounds can be judged. The first heart sound is best assessed at the apex or lower left sternal edge and is either single or closely split. Splitting is usually confined to the lower sternal edge and is normally not heard at the base. Although analysis of the first heart sound provides helpful information, analysis of the second heart sound is far more useful and has been called the key to "auscultation of the heart." Proper interpretation of the second sound assumes an awareness of its location, splitting, and intensity. In the second left intercostal space there are 2 components, aortic and pulmonic, which are synchronous (or nearly so) during expiration and split during inspiration. A judgment regarding the intensity of pulmonary valve closure requires comparison with aortic closure when both sounds are heard simultaneously during inspiration. The comparative softness of the pulmonary closure sound is held responsible for its localization in the vicinity of the second left intercostal space, and the relative loudness of aortic closure accounts for its audibility at all areas. It should clearly be stated that $A_2$ refers to aortic valve closure and $P_2$ to pulmonary valve closure. $A_2$ and $P_2$ do not refer to the second heart sound in the "aortic" vs. the "pulmonary" area; such use implies a complete misunderstanding of the origin of the 2 components of the second sound. Similarly, $P_2$ by definition is a single sound caused by pulmonary valve closure, and the expression "split $P_2$" is a misnomer that should be abandoned.

---

* Submitted to the MEDICAL ANNALS by the Washington Heart Association.

† Professor of Medicine, Division of Cardiology, Georgetown University School of Medicine, 3900 Reservoir Road, N.W., Washington, D.C. 20007.

The third and fourth heart sounds are best understood in relation to the 2 diastolic phases of ventricular filling. These sounds originate within the recipient ventricle, the third sound during the mid-diastolic filling phase, and the fourth sound during the presystolic filling phase. Accordingly, a fourth heart sound implies sinus rhythm. Both sounds are low-frequency events that are most readily heard with light touch of the stethoscopic bell.

The foregoing heart sounds—first, second, third, and fourth—can either be normal or abnormal. The following sounds are, for all practical purposes, abnormal events.

Opening snaps characteristically originate in the mitral valve usually because of stenosis. The snap is of relatively high frequency, is heard not only at the apex but also at the sternal edge and base, and is best elicited with the stethoscopic diaphragm or firm pressure with the bell. Since the mitral valve must open before the ventricle can fill, the timing of the opening snap necessarily precedes the timing of the third heart sound.

Ejection sounds are high-pitched, clicking early systolic events that originate in either the left side of the heart (aortic valve or dilated ascending aorta) or right side of the heart (pulmonic valve or dilated pulmonary trunk). These sounds tend to be heard at the base of the heart and should not be mistaken for split first heart sounds. The aortic ejection sound is well heard at both the base and apex and with rare exception does not vary with respiration; the pulmonic ejection sound is well heard in the second left intercostal space and often varies characteristically with respiration, getting selectively softer with inspiration and louder with expiration.

Systolic clicks must be distinguished from ejection sounds. The clicks are similar to ejection sounds in but not in timing or chest-wall location. Clicks generally originate in rebundant mitral chordae tendineae; they are single or multiple, maximal at the apex, and begin in mid to late systole.

## Cardiac Murmurs

A cardiovascular murmur is a relatively prolonged series of auditory vibrations characterized according to intensity (loudness), frequency (pitch), configuration (shape), quality, duration, direction of radiation, and timing in the cardiac cycle. The timing of murmurs is particularly important since it serves as a basis for classification. Systolic murmurs are classified according to their time of onset and termination as midsystolic, holosystolic, early systolic, or late systolic. A midsystolic murmur begins after the first heart sound and ends before the second sound (aortic stenosis). A holosystolic murmur begins with the first heart sound, occupies all of systole, and ends with the second heart sound (classic mitral incompetence). Early systolic murmurs begin with the first heart sound, diminish in a decrescendo fashion, and end at or before midsystole (very small ventricular septal defect with early systolic shunt). Late systolic murmurs begin in mid to late systole and end with the second heart sound (mitral incompetence with late systolic regurgitation). Finally, extracardiac systolic arterial murmurs originate in either systemic or pulmonary arteries. The existence of such murmurs emphasizes the importance of careful auscultation at non-precordial sites.

Diastolic murmurs are classified according to their time of onset as early diastolic, mid-diastolic, or late diastolic (presystolic). An early diastolic murmur begins with the second heart sound (aortic incompetence). A mid-diastolic murmur begins at a clear interval after the second heart sound (mitral stenosis with atrial fibrillation). A late diastolic murmur or presystolic murmur begins in the period immediately before the first heart sound (mitral stenosis with sinus rhythm).

The term "continuous" is best applied to murmurs that begin in systole and continue without interruption through the time of the second heart sound into all or part of diastole. Persistence of murmurs throughout the cardiac cycle is therefore not a requirement. Accordingly, a murmur that procedes into diastole without stopping at the second heart sound is considered continuous whether or not it finishes before the next first heart sound. Continuous murmurs can be due to aortopulmonary communications (patent ductus), arteriovenous connections (systemic arteriovenous fistulas), or they can be purely arterial (arterial constriction), or purely venous (venous hum).

## Summary

There are few areas of clinical cardiology that auscultation does not animate. This paper has reviewed 3 areas relevant to this topic: 1) the technicalities and techniques of auscultation, 2) the heart sounds, and 3) cardiovascular murmurs. Skill in auscultation remains a hallmark of the good clinician and it is understandable why this is so.

SUPPORT YOUR
MENTAL HEALTH ASSOCIATION

# Glomangioma (Glomus Tumor): Report of Case with 50-year History*

DONALD A. JOHNSON, M.D., PH.D.

GLOMANGIOMAS ELUDE CORRECT diagnosis for remarkably long periods of time. That they continue to do so, justifies the continued reporting of individual cases.

## Report of a Case

The patient was a 57-year-old lady complaining of pain in the right foot. The pain began spontaneously at the age of 7. When the patient was 15 years old an operation was done "to cut the nerves", an indeterminate procedure which left an incision across the lateral and plantar aspect of the foot midway between the heel and the toes, but the pain continued.

In 1942 a right lumbar sympathectomy was done. This procedure reduced the intensity of the pain but did not relieve it. In 1958 a peripheral nerve-crush procedure at the level of the ankle was done by a neurosurgeon. The pain was relieved for 3 months and then recurred.

The patient described the pain as confined to the lateral aspect of the foot. She had been forced to walk on the toes of the affected foot for many years inasmuch as weight-bearing on the mid-plantar aspect of the foot was intolerably painful. Heat made the pain worse, but ice applied locally gave some relief.

The patient would not allow the foot to be touched. She withdrew it reflexly at the slightest gesture. She was appropriately apologetic but said that examination of the foot was absolutely intolerable. The foot appeared deformed, having a marked talipes equinus posture. There was marked atrophy of the leg (figure 1). The patellar reflexes were normal. Flexion and extension of the ankle and knee were accomplished freely. Toe movement was normal.

X-ray films of the foot were negative. A myelogram was negative. Two orthopedists suggested peripheral neuritis and causalgia without suggestions for treatment.

A diagnosis of glomus tumor was made, and surgical exploration was proposed.

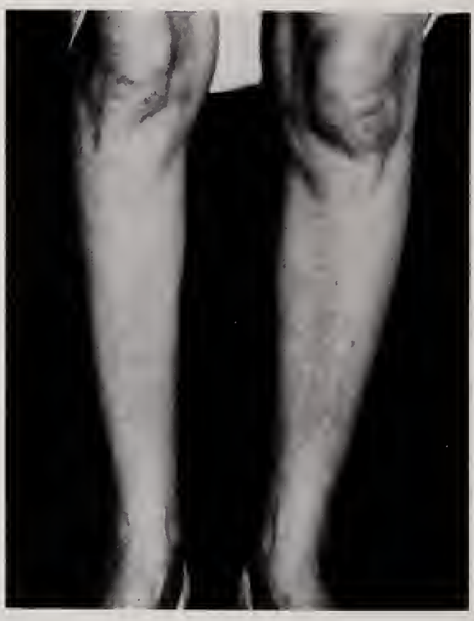


**FIG. 1.** Atrophy of the right leg.

At surgery, with the patient under general anesthesia, careful palpation of the foot could be done. No mass was palpable but there was a small blue swelling on the lateral aspect. No mass was palpable beneath it, and it seemed likely that the swelling was simple cutaneous distortion from previous surgery with associated prominent veins.

Incision over this area revealed a grey lobulated tumor mass in the subcutaneous tissues measuring 2 x 3 cm. It extended some 3 cm deep into the soft tissue of the foot. The tumor was well demarcated from surrounding subcutaneous tissue. Its clear demarcation and distinctive grey coloration made complete removal easy.

The pathological diagnosis was glomus tumor (glomangioma).

## Discussion

Glomus tumors comprise less than 2% of the soft tissue tumors of the extremities after epithelial varieties are excluded.[1] They are more common in the upper than in the lower extremities. The most common location is subungual, and when in this location they are usually recognized early and treated

---

* From Doctors Hospital

Address reprint requests to Dr. Donald A. Johnson, 915 19th Street, N.W., Washington, D.C. 20006.

appropriately. They are also found in the forearm, hand and thigh in a descending order of frequency. They may be found anywhere on the body surface and have been reported in the subgingival and periodontal tissues,[2,3] the eyelid,[4] within the nasal cavity,[5] on the penis,[6] and the auricle.[7]

The tumor is usually subcutaneous. It may be beneath the fascial planes or on the muscular facia,[8] within muscle substance,[9] between muscle tendons or within a joint capsule,[7] or within bone, the latter especially when the tumor is located in the terminal phalanx.[10]

Pain is the principal symptom and is almost always present. Painless tumors occur as well as painful ones, and when tumors are multiple, there are more likely to be painless ones. Pain is usually caused by pressure over the tumor, and the pain is usually severe. Changes of temperature may induce pain, and at times the paroxysms of pain seem to be spontaneous. The pain is usually of brief duration but may last several hours. Occasionally the pain is constant with sharp exacerbations due to pressure. The pain may radiate from the site of the tumor.

The tumor is usually only a few mm in diameter. If a mass is visible it appears as a blue or blue-red nodule. It can be mistaken for a varicosity. There is often no visible or palpable lesion at the site of the pain.

In our case reported, despite the presence of a visible suggestive cutaneous abnormality, there was no palpable abnormality, and even when the tumor was exposed, it could not be distinguished from the surrounding subcutaneous tissue by palpation.

Palpation is often refused by the patient, and this is of diagnostic significance.

Secondary changes consisting of muscle atrophy, osteoporosis and hypersensitivity of surrounding soft tissue may occur. Atrophy of disuse may occur in the involved limb. Pallor of an involved limb during paroxysms of pain has been reported and might simulate Reynaud's phenomenon.[11] Flushing or sweating may occur with warming or cooling the limb.[12]

When the tumor is in the hand or foot X-ray films may show pressure atrophy of adjacent bone or cystic involvement. In these locations, transillumination may reveal the tumor.

Glomus tumors are rarely multiple. They are also rare under the age of 16, but multiplicity is most common in children.[13] The tumor may be present at birth.[14] Multiple tumors are usually grouped in a limited area but on an extremity, and they may be very numerous, as many as 90, and scattered diffusely over the body.[15] When multiple, it is common for some tumors to be painful and others non-painful. Several members of a family may be afflicted. Multiple tumors may appear simultaneously in widely separated areas of the body or develop successively over periods of years.[16] A painless tumor may become painful after trauma.

The normal glomus is an arteriovenous shunt, a regulator of arterial bloodflow. It arises from the cells comprising the outer coat of normal capillaries and glomeruli. These are called pericyte cells, and the tumor is composed of pericytes and capillaries. It may or may not be encapsulated but is sharply demarcated and has the consistency of subcutaneous tissue. Grossly, it has a grey-brown appearance, resembling a lymph node if it is large. It is more commonly a red-blue color and a few mm in diameter. Malignant change has not been reported, but occasional tumors have been diffusely invasive.[7]

Bailey[17] suggested the name "glomangioma" for tumor of cutaneous glomus. This designation has been widely accepted and serves to distinguish the clinical entity discussed here.

The term "glomus tumor" has also been applied to tumors of the carotid body, tympanum, jugular bulb, mediastinum, and stomach.

The stomach tumor is histologically identical with the subcutaneous variety. There is a mass with symptoms of obstruction or ulceration and bleeding. Pain, except as referable to obstruction, is not a symptom.

Chemodectomas, the non-chromaffin tumors of paraganglionic structures in the neck, mediastinum, and at the base of the skull are also referred to as "glomus" tumors. The carotid body tumor is the most common variety. The clinical characteristics and pathology of this group of tumors are distinctive and should not be confused with the painful subcutaneous glomangiomas.

The appropriate treatment for a glomangioma is total surgical excision. The tumor will recur if excision is not complete. Very small subungual tumors are particularly difficult to find and to excise completely. In other locations it is advisable to look under the deep fascia for additional tumors even when one has been found in the superficial tissues.[8]

Local and regional hypersensitivity may persist for several weeks after excision and then gradually subside.

## Summary

The remarkably long history in the case reported here suggests that glomangiomas are often forgotten in the differential diagnosis of obscure pain. A brief

clinical review has been compiled from the literature. If this tumor is considered when there is a pain problem, its diagnosis will seldom be missed.

## References

1. SOULE, F. H., GHORMLEY, R. K. and BULBULIAN, A. H.: Arch. Surg. (Chicago), 1955, 70, 462.
2. KING, E. S. J.: Aust. New Zeal. J. Surg., 1953-54, 23, 280.
3. HARRIS, R. and GRIFFIN, C. J.: Aust. Dent. J., 1965, 10, 33.
4. KIRBY, D. B.: Arch. Ophthal., 1941, 25, 228.
5. PANTAZOPOULOS, P. E.: Arch. Otolaryng., 1965, 81, 83.
6. GRAUER, R. C. and BURT, J. C.: J.A.M.A., 1939, 112, 1806.
7. KOHOUT, E. and STOUT, A. P.: Cancer, 1961, 14, 555.
8. ROUNTREE, T.: Brit. J. Surg., 1952, 40, 142.
9. GERMAN, W. M.: Amer. J. Clin. Path., 1945, 15, 199.
10. MACKENZIE, D. H.: J. Bone Joint Surg., 1962, 44-B, 648.
11. YELEN, F. S. and FOUNTAIN, E. M.: J. Neurosurg., 1968, 29, 645.
12. OTTLEY, C.: Brit. J. Surg., 1941-42, 29, 387.
13. PHALEN, G. S. and MOUROULIS, D. I.: Cleveland Clin. Quart., 1966, 33, 73.
14. KAUFFMAN, S. L. and STOUT, A. P.: Cancer, 1965, 18, 460.
15. EYSTER, W. H. and MONTGOMERY, H.: Arch. Dermat. Syph., 1950, 62, 893.
16. GUPTA, RAJ. K., GILBERT, E. F. and ENGLISH, R. S.: Arch. Derm., 1963, 92, 670.
17. BAILEY, O. T.: Amer. J. Path., 1935, 11, 915.

# Osler's Textbook of Medicine

BENNIE A. MOXNESS, M.A., M.D.*

SIR WILLIAM OSLER was born in 1849 and died in 1919. During his life span of 70 years he contributed some 730 articles to medical and scientific literature. His contributions date from about 1870 to 1919, a period of 49 years.[1]

Most recent contributions to the literature about Osler cover the period of 50 years from his death to 1969. Many articles appear on medical progress and evaluation of his contribution to medical literature in this time. For example, a 1970 search of the Authors Titles Name Catalog in the library card index at the National Library of Medicine reveals over 100 index cards on Sir William Osler by various writers.[2] Also, the 50-year commemorative issue of the Journal of The American Medical Association has 16 articles by different writers about Osler.[3]

The following inscriptions from the National Archives of the United States bear repeating in this type of historical study: "Study the past" and "What is past is prologue". Therefore, this preface or introduction to a discourse on Osler. I propose within my limited means to delve into the highlights of a period of 100 years since Osler's first apparent publication about 1870. This first article according to G. Ross reveals that when 20 years old Osler from Dundas, Ontario published a short note on science for an English magazine. In Ross' opinion this brief note ushered in many of the great expectations about Osler. The title of this article was "Christmas and the Microscope". It was not until 23 years later that he wrote his book "The Principles and Practice of Medicine", the most widely read textbook on medicine in the English Language.[3c]

Many of Osler's articles are in the library of the Johns Hopkins Hospital and have additional value as being personal gifts from Osler. A review of Osler's bibliography by M. W. Blogg shows 1 article published in 1870 and about 4 in 1919, but the time of his greatest productivity appears to be 1878 to 1915, for example, about 57 articles in 1878 and 16 in 1898. In 1875 he gave the valedictory address to the graduates at McGill University. In 1917 he published an article on War Wastage, a note of warning to examiners of recruits in the J.A.M.A. In May of 1919, the last year of his life, he gave an address on "The Old Humanities and The New Science" before the Classical Association at Oxford.

According to Talbott some of the principal appointments held by Osler were at McGill University, Montreal General Hospital, where after a decade he went to the University of Pennsylvania as professor of clinical medicine. In 1888 he moved to Baltimore, Maryland to become physician-in-chief to the recently organized Johns Hopkins Hospital. He spent the last 15 years of his life at Oxford England occupying the Regius Chair of Medicine until his death on December 29, 1919, from bronchopneumonia and empyema. It is easy to understand why no one has received the fond attachment, respect, and hero worship he received in this long occupancy of the Regius Chair.

McGovern and Roland[4] in 1969 published a book on continuing Medical Education (Osler). These authors investigated the wealth of material about Osler and realized that many articles warranted critical comment as well as re-publication. Fourteen articles were selected dealing with the theme of education in medicine. Certain essayists were selected to prepare a critique of each of these papers and on the contemporary significance of Osler's ideas. Osler had a poor opinion of examinations, and in an essay he is quoted as saying "Perfect happiness for student and teacher will come with the abolition of examinations". Of the 14 articles selected for this review, in 1 on Science and War he stated that in 2 ways Science is the best friend war has ever had because it enormously increased man's capacity to maim and disable his fellow man. From 1790 to 1913 there were 18,522,200 men engaged in the great wars. of whom 5,498,097 lost their lives (D. E. Smith). The improvement in care of the wounded was noted, comparing their care in Napoleon's time and the time of Osler's article. Prevention of disease was the second great victory of science in war. Pestilence has always plagued the labors of war, and the saying is true that disease, not battle, digs the soldier's grave. The fates of campaigns have been decided by mosquitoes and flies. In an address at Leeds, Osler in 1915 stated, "Half a century has done more than a hundred centuries to solve the problem of first importance concerning infections.[4]

---

* Colonel, United States Air Force, Medical Service (Retired).

Roland[3d] stated that Osler was not a great man in scientific medicine. His discoveries were minor, as he himself admitted. He had the ability to inspire others to perform far beyond their supposed capacity and also had the good luck or skill to select those whom he wished to inspire. Talbott[3a] noted that Osler was a busy investigator of diseases such as typhoid fever, malaria, pneumonia, etc. He was at his best as a clinical teacher and a diagnostician. He emphasized treating hospital patients as human beings and not merely as interesting cases; he applied the golden rule to his professional colleagues and his patients. Howard[3e] added that Osler's fame may be ascribed to many things, including his writings and his love of books.

The friends and pupils of Osler are rapidly leaving this world, but his influence in medical schools, hospitals, libraries and research institutions that he and his pupils created will live on. Osler's first textbook, *The Principles and Practice of Medicine,* published in 1892 revealed his prominence in medical writing. Through the courtesy of the National Library of Medicine I have reviewed this and other editions of Osler's textbook. The first edition was published by D. Appleton & Co. (1,080 pages). The preface states that the book was designed for the use of students and practitioners of medicine. Osler is listed therein as a Fellow of the Royal College of Physicians, Professor of Medicine in the Johns Hopkins University, and Physician-in-Chief to the Johns Hopkins Hospital.

The textbook[5] had 11 sections; The specific infectious diseases, 268 pages; constitutional diseases, 50 pages; diseases of the digestive system, 146 pages; blood and ductless glands, 30 pages; kidneys, 56 pages; nervous system, 219 pages; muscles, 5 pages; respiratory system, 103 pages; circulatory system, 101 pages; intoxications, sunstroke, obesity, 18 pages, and animal parasites 20 pages. There were 19 charts and some figures. The first 5 charts related to the course and complications of typhoid fever, the first disease described in the text. Typhoid fever appeared mostly in the autumn months. For example, of 1889 cases admitted to the Montreal General Hospital over a 20-year period more than 50% were in the months of August, September and October. In that hospital the death rate for the 20-year period was 11.2%. In the treatment of typhoid fever the general management was stressed, with careful nursing and diet being essential in the majority of cases. The profession was a long time in learning that typhoid fever is not a disease to be treated by medicines. The text noted that in cities the prevalence of typhoid fever was directly proportional to the inefficiency of the drainage and water supply. There is no better indicator of the sanitary condition of a town than the returns on the number of typhoid fever cases.

Tuberculosis was well described (72 pages). Newgrowths in the lungs had only 2 pages; primary tumors of the lungs were rare, secondary not uncommon. Carcinoma of the lung was most common in middle age; predisposing conditions were quite unknown, but workers in the Schneeberg cobalt mines were very susceptible to primary cancer of the lung. In the Schneeberg region many of the deaths in persons over 40 years of age were due to this disease; the duration of the disease was 6 to 8 months or less.

Diabetes (10 pages) was defined as a disorder of nutrition in which sugar accumulates in the blood and is excreted in the urine. As to etiology, various causes were mentioned such as heredity, race, combinations of intense application to business, and overindulgence in food and drink with a sedentery life. As to prognosis, Osler stated that he personally never had seen recovery from a case of diabetes. As to treatment, personal hygiene was of first importance, with reduction of carbohydrate to a minimum. Medical treatment was most unsatisfactory, and no drug had curative value. Opium alone was the only remedy capable of limiting the progress of the disease. Diabetic patients seemed to have a special tolerance for this drug, but not much effect was noted unless the patient was on a rigid diet.[5]

Time and space limitations will not permit detailed reviews of the later editions of Osler's textbook, and I shall mention only a few significant changes. In the 4th edition (1901, 1180 pages) the prevalence of typhoid fever was said to be proportional to the inefficiency of the drainage and water supply and that it was the physician's duty to carry out effective prophylactic measures as to the care of the patient. The text portrays the typhoid situation at the time of the Spanish American War thus, "one-fifth of the soldiers in the national encampments in the United States had typhoid fever; among 107,973 men there were 20,738 cases (19.2%). In the 5th edition (1902–1903, 1182 pages) the chapter on typhoid fever had been rewritten and covered 48 pages. The chapter on the all-important disease of pneumonia was rewritten. In the 6th edition (1905) mention was made that A. E. Wright had introduced a method of vaccination against typhoid fever. The material used was a bouillon culture of virulent bacilli, heated to 60°C in order to kill the bacilli. Inoculations were recommended at about 2-week intervals. In the 8th edition (1912, 1225 pages) typhoid fever is mentioned as 1 of the great scourges of the armies. It

SIR WILLIAM OSLER
1849-1919

killed and maimed more than powder and shot. According to a report by the typhoid fever commission during the Spanish-American War, important factors were camp pollution, flies as carriers of contagion, and contamination through the air in the form of dust.

Pneumonia (98 pages) was considered a self-limited disease which could not be aborted or cut short by any known means. It was considered 1 of the most fatal of all acute diseases, killing more than diphtheria and outranking even tuberculosis as a cause of death. In his preface to the 8th edition Osler indicated that 20 years had passed since the 1st edition. Osler also mentioned that as far as possible this edition had been revised to correlate with his experience in hospital and private practice and knowledge gained from professional literature. He acknowledged the assistance of Thomas McCrea, M.D., in revising this edition.

The 9th edition (1920-1922, 1,168 pages), that which I used in medical school was revised by Dr. McCrea, Fellow of the Royal College of Physicians. McCrea stated that the death of Sir William Osler took from medicine and medical literature one of its greatest masters. He stated that the 1918 influenza epidemic was severe in American camps and on transports. The Olympic, for example, arrived in port with 5,951 troops, and on the day of arrival 571 cases of acute respiratory disease, and within 3 weeks there were 1,668 cases. Of these 534 (32%) had pneumonia, of whom 317 (59%) patients died. Malarial fever (25 pages) was well described. The discovery of the malarial parasite by Laveran brought hope that it would soon be possible to exterminate malaria. The efforts of Ross and in the Canal Zone by Colonel Gorgas were considered triumphs in the application of scientific method. Quinine was considered the only known drug which was an effective parasiticide. Its use in adequate dosage was therefore considered important in the treatment and prevention of malaria. In my medical school days I had the impression that malaria was well controlled. After graduation from medical school and the Army Medical School, and assignment to the Canal Zone in 1928, I found malaria still to be a major health problem in the Tropics as it now appears to be in our Southeast Asia campaign.

The 10th, 11th, and 12th editions were continued with McCrea as editor. The 12th edition (1935) has 1,196 pages, 13 sections, but only 1 chart on typhoid fever. In this last edition by McCrea he expressed his belief that a textbook should emphasize the clinical side of disease problems. Diseases change in many ways, and one of the interests as one grows older in his medical life is to watch these changes, since new diseases or what seem new appear, some grow less important, and others disappear. Typhoid fever has become so infrequent in cities that our students have no opportunity to know this disease adequately, so that in rural areas they may encounter it as an unknown entity.

The 13th edition (1938) was the first revision of Osler's medicine by Henry A. Christian, M.D. The 14th edition (1942, 1,475 pages) Christian called the semicentennial edition (50 years after the 1st edition in 1892). Christian mentioned that Osler was assisted after 1912 by McCrea. During these 50 years medical knowledge was modified from edition to edition by the guiding hand of a single author, who preserved the continuity of thought and balance in description and obviated a fault often found in books of multiple authorship. Christian revised the format of the text in that the introduction discusses psychosomatic and functional diseases of the nervous system. In prior editions the opening chapter had been on the infectious diseases. This change was made to emphasize the importance of the functional or psychic aspects of medicine, with the hope that the student or practitioner would have a better understanding of what would ordinarily be looked upon as purely organic disease. The functional nervous diseases take up about 35 pages in the text.

The 16th edition was the last edited by Christian. It continued the principle of single editorship which began with the 1st edition by Osler. Since the 15th edition (1944) many advances had taken place in medicine. For example, the use of chemotherapeutic drugs, notably sulfonamides and penicillin, necessitated great changes for about almost all infectious diseases; but the chapter on typhoid fever still required 30 pages and tuberculosis 80 pages. The preface to the 16th edition had a chapter on the history of medicine for the period 1892 to 1947 by J. G. Carr, in which he mentioned some of the many ways medical practice had changed because of new discoveries, that for example, in Osler's 4th edition, 1901, it was believed reasonable to assume that diabetes was secondary to pancreatic diseases. The discovery of insulin, another progress, was incorporated in the 10th edition (1925).

Following the 16th edition (1947) there was a break in continuing revisions until 1968, when A. McGehee Harvey and associates at Johns Hopkins University published the 17th edition of "The Principles and Practice of Medicine". However, before commenting on this last revision a few comments from a publication "Osler's Textbook Revisited" by A. McGehee Harvey and Victor A. McKusick appears in order. This book, published in 1967 (361 pages) reveals that Osler's Principles and Practice of Medicine had an important role in the training of at least 2 generations of physicians together with an influence over the practice of medicine. These authors selected Osler's 7th edition (1909) for discussion in this reprint because it was the last Osler did without assistance. It also represented the highest point of his textbook, together with corrections of errors in earlier editions. In the epilogue to this publication the authors believe that since Osler's resumé in 1909, our added understanding has been mainly in the realms of etiology, pathogenesis, and therapy.[5]

As stated, the 17th edition of Osler's medicine appeared in 1968 with A. McGehee Harvey and Associates as editors (1472 pages, Appleton-Century-Crofts as publishers). There are many contributors. There are 19 sections, a changed classification of disease, and a new format. The preface to the 17th edition reveals that in 1892 the first edition of Osler's textbook was written entirely by Osler and covered the entire field of medicine. There have been many revisions of this textbook by different editors. The 17th edition was therefore conceived as a Johns Hopkins textbook of medicine, as proposed by Osler in a letter regarding his 7th edition. The present authors emphasized clinical problems rather than disease entities. The 17th edition is not considered a revision of Osler's great book but a product of a single department in which observations of clinical excellence are a major goal. It is therefore not a product of a single author but a group endeavour. The first chapter is devoted to the approach to the patient. Diabetes covers 17 pages of text, and the salmonella group is discussed, along with many others.

In summarizing this brief review of Sir William Osler's contribution to science and medicine begun about 100 years ago I have briefly mentioned a few historical evaluations of his contributions by different writers. I have also briefly reviewed his textbook "The Principles and Practice of Medicine", beginning with the 1st edition (1892) and ending with the 17th revision in 1968. This review indicates to me that medical education and practice are constantly changing. Among the reasons for this are new scientific discoveries as well as new social and economic demands by the public. These revisions indicate to me the importance of keeping a textbook up to date. The importance of preventive and curative medicine in civilian and military practice is emphasized, for example, in many military situations in the past disease has killed and disabled more men than bullets. It will demand eternal vigilance in the future to control and prevent recurrence of these scourges.

I also believe that modern medicine is too complicated for a single authorship of a textbook and that multiple authorship may be indicated for future texts, as stated in the 17 revision of the text by Dr. Harvey and associates. I also realize that the extensive literature review to adequately portray Osler's works is more than 1 person is able to accomplish and publish in a single article. I acknowledge assistance from the Editor of the District of Columbia Medical Society Annals in revision of this manuscript.

In closing this paper two quotes from the frontispiece of Osler's 1st edition seem appropriate.

> "Experience is fallacious and judgment difficult" (Hippocrates).
>
> "And I said of medicine, that it is an art which considers the constitution of the patient and his principles of action and reasons in each case "(Plato; Gorgios).

## References

1. BLOGG, MINNIE WRIGHT: Bibliography of Sir William Osler. Johns Hopkins Hospital Bulletin, July 1919, Vol. XXX, 341.
2. Authors Name Catalog, National Library of Medicine, 1970.
3. J.A.M.A., 1969, 210, 12. Commemorative Issue, Osler's contributions, Pp. 2213-2271, as follows:
    a) TALBOTT, J.H.: Biographical Essay, Pp. 2269, 71.
    b) PICKERING, SIR GEORGE: Osler, Pp. 2268-69.
    c) ROSS, G.: Portrait of Osler by His Contemporaries, Pp. 2261-62.
    d) ROLAND, C.G.: William Osler, 1949-1919, P. 2213.
    e) HOWARD, R.P.: William Osler and Bartholomaes Anglicus, Pp. 2251-53.
4. MCGOVERN, J. P. AND ROLAND, C. G.: The Continuing Medical Education (Wm. Osler). Springfield, Illinois: C. C. Thomas Co., 1969, 365.
5. The Principles and Practice of Medicine, SIR WILLIAM OSLER, 1st to 8th editions.
    THOMAS MCCREA, 9th to 12th editions as revised.
    HENRY A. CHRISTIAN, 13th to 16th editions as revised.
    A. MCGEHEE HARVEY AND V. A. MCKUSICK: Osler's Textbook revisited, 1967.
    A. MCGEHEE HARVEY AND ASSOCIATES, 17th edition revised, 1968.

Addendum. The 1st to the 12th editions of The Principles and Practice of Medicine were published by D. Appleton & Co. (1892–1935)
Appleton Century published the 13th through the 16th editions. (1938–1947)
Appleton Century Crofts published the 17th edition. (1968) (This reveals a continuity of publishers over a period of 76 years)
Meredith Publishing Co. published Osler's Textbook Revisited. (1967)

# Clinicopathologic Conference: Hepatomegaly for 17 Years in a 65-Year-Old White Man

CHANDLER SMITH, M.D.*

THE FOLLOWING CASE REPORT was presented for discussion at the bi-weekly Clinicopathologic Conference held at the George Washington University Hospital, April 8, 1970.

The patient was a white man 65 years old who entered the hospital because of weakness, weight loss, and diarrhea. The weakness was gradually progressive, the weight-loss amounted to 24 pounds over the past year, and the diarrhea had been gradually worsening over the past 2 years, presently amounting to 2 to 3 watery stools per day. The diarrhea seemed to increase after eating meats, green vegetables, or citrus fruits. In recent months large amounts of food had caused nausea. The patient had experienced intermittent pain in the right upper quadrant of the abdomen for many years. In addition, he had noted nocturia for the past 6 months, and during that time intermittent swelling of the lower extremities had occurred. There had been no jaundice, heart disease, diabetes, or tuberculosis.

An appendectomy at the age of 43 had failed to relieve pain in the right upper quadrant of the abdomen. At 47 he had an acute right pyelonephritis associated with a concretion in the right ureter. In the following year hepatomegaly was noted, and the acute urinary infection recurred. The hepatomegaly persisted, and at 63 the bronsulfalein retention was found to be 22% in 45 minutes. The urine was normal, but an intravenous pyelogram failed to reveal the right ureter. The bone marrow disclosed plasmacytosis suggestive of a proliferative disorder of plasma cells or lymphocytes. Electrophoresis of serum protein revealed all components to be within normal range. At 64 hepatomegaly was again noted, the bromsulfalein retention was 8% at 45 minutes, and the urine was found to contain 3-plus protein. The 24-hour urinary excretion of protein at that time was 3.16 Gm, the creatinine clearance 27 ml, and the blood urea nitrogen 48 mg per 100 ml. Radiographs had revealed lateral displacement of the stomach by an extrinsic mass, and biopsy of the mucosa of the small intestine had disclosed atrophy of the villi.

Physical examination revealed a thin, weak, chronically ill man. The temperature was 98.6° F., respiratory rate 18, pulse rate 96, and blood pressure 110/70 mm Hg. The head, neck, and chest were not remarkable. Lymph nodes were not enlarged. The abdomen was flat and soft. The liver extended 11 cm below the right costal margin and 9 cm. below the left costal margin. The surface was smooth, firm, and nontender. The spleen was not palpable. Except for 3-plus pitting edema of the ankles, the remainder of the physical examination was not remarkable.

The urine was normal except for a 4-plus proteinuria, 2 to 5 granular casts and 0 to 2 leukocytes per high-power field of sediment. The hemoglobin was 16.7 Gm, the hematocrit was 51, and the leukocytes numbered 10,800 with 72 segmented granulocytes, 6 band cells, 17 lymphocytes, 2 monocytes, and 2 basophiles. The blood urea nitrogen was 115 mg, the serum creatinine 6.9 mg, and the blood calcium 6.0 mg. The serum phosphorus was 10.8 mg. The serum alkaline phosphatase was 280 units (normal 30-85). Blood glucose, uric acid, serum cholesterol, total bilirubin, lactic dehydrogenase, and glutamic transaminase were all normal.

On the second hospital day respirations became labored, a spastic seizure occurred, the blood pressure dropped, and the patient died.

## Clinical Discussion

Dr. James D. Finkelstein†: The major problem in this case is the explanation of hepatomegaly of 17-years' duration. In some manner we must account for this finding. I think we might begin by discussing 4 aspects of this clinical record. The first is renal disease. Eighteen years ago there was an episode of pyelonephritis, 2 years ago the urine was normal although an intravenous pyelogram failed to visualize the right kidney, and 1 year ago there were nocturia, pronounced proteinuria, and elevation of the blood urea nitrogen. Thereafter the renal failure was rapidly progressive with retention of urea nitrogen, creatinine, and phosphorus. Death was likely due to renal disease. Significantly, hematuria is never mentioned, and I shall return to the importance of this later.

---

* Professor of Pathology, The George Washington University School of Medicine, 1335 H St., N.W., Washington, D.C. 20005

† Associate Professor of Medicine, George Washington Univ. School of Medicine Medical Investigator and Chief of Biochemistry and Hepatology at Veterans Administration Hospital, Washington, D.C.

The second feature of this case is the liver disease. Bromsulfalein retention is noted twice, and while this may be due to faulty technique or hemodynamic alterations, it is probably evidence of decreased function. The alkaline phosphatase is also elevated. Although this may suggest biliary involvement, neither the serum bilirubin nor the transaminase are abnormal. Of course, the alkaline phosphatase may be derived from bone. It is not technically difficult to separate the isoenzymes of liver and bone to indicate the source.

The third aspect is the gastrointestinal disturbance which I find somewhat confusing. The patient has had right upper quadrant pain for 22 years, diarrhea for 2 years, and villous atrophy of the small intestine for at least 1 year. Villous atrophy is observed in tropical or nontropical sprue but neither diagnosis is suggested by the clinical picture. Other situations in which we see villous atrophy include the margin of a gastrojejunostomy, which is not a consideration here, and lymphoma of the small intestine. Distention of the villi may occur in amyloidosis and give the appearance of atrophy. I must say that, in my own experience, a common cause of this finding is a tangential section of the tissue which creates the artifactual appearance of atrophy.

Lastly, I want to point out the hematologic observations. Plasmacytosis of bone marrow has been known for 2 years although the serum proteins are entirely normal. This is not sufficient for a diagnosis of plasma-cell myeloma. Moreover, the hematocrit is 51, the hemoglobin 16.7 Gm, and the leukocyte count is normal.

It would be very helpful at this point to know whether the urine was examined for Bence-Jones protein, and whether a similar clinical illness had been observed in any other member of the family.

Dr. Smith: The urine was negative for Bence-Jones protein and there was no familial history of a similar condition.

Dr. Finkelstein: I should like to try to put this together now. The facts about the liver are the hepatomegaly, the bromsulfalein retention, and the alkaline phosphatase elevation with normal serum bilirubin and transaminase. I think we can conclude from this that there are no necrosis, no widespread inflammation, and no cholestasis. This pattern can result from chronic hepatic venous congestion. Obstruction of the hepatic vein (Budd-Chiari syndrome) is unlikely. The association with renal dysfunction requires either thrombi in renal as well as hepatic veins or a second pathophysiological mechanism. A history of 17 years would be long for the Budd-Chiari syndrome. In addition, ascites was not present, and dilated veins over the abdomen would be expected, particularly with involvement of the vena cava.

Long-standing or "latent" cirrhosis is another possibility. However, we might expect to find ascites, reduced serum albumin, and less pronounced hepatomegaly. Also, the attending physicians observed none of the other physical findings associated with cirrhosis such as gynecomastia, spider angiomas of the skin, and palmar erythema.

This patient typifies the laboratory abnormalities found in the infiltrative diseases and space-occupying lesions of the liver. In this group I include granulomatous disease, neoplasm, benign cysts and amyloidosis. We have no evidence for granulomas, particularly sarcoidosis or tuberculosis. Nodal and skin involvement would have supported the former, the liver is too large for tuberculosis, and the absence of fever is against both. Metastatic carcinoma is inconsistent with hepatomegaly of this duration. The same may be said for primary hepatic carcinoma which, in addition, usually arises in cirrhotic livers. The patients usually have more abdominal pain, and death is not due to renal disease. This leaves amyloidosis and polycystic disease. In favor of the latter is the rather high frequency of simultaneous involvement of kidneys and liver. However, there are some strong negative points. For example, the adult with polycystic disease often develops a clinical picture including palpable kidneys, hypertension and hematuria. Moreover, one intravenous pyelogram was normal, and a nephrotic syndrome is not at all characteristic of this condition. Therefore, I would discount polycystic renal disease.

That leaves amyloidosis. Much favors it. Almost any organ may be affected in the primary, secondary, or myeloma-associated varieties. Massive renal enlargement is not required, as would be expected with polycystic disease, yet hepatomegaly is perfectly consistent. Renal failure is commonly encountered, and neither hypertension nor hematuria is expected. Involvement of abdominal nerves with a resultant visceral neuropathy may explain the diarrhea and abdominal pain, as might direct involvement of the gastrointestinal tract. However, there is 1 fundamental question—is hepatomegaly of 17 years' duration compatible with amyloidosis? Some cases have a long duration, and this diagnosis fits best. I shall therefore make this diagnosis with the realization that if this is amyloidosis it is an unusual case.

Dr. Rosenbaum: It is my understanding that secondary amyloidosis tends to last longer than the primary form.

Dr. Finkelstein: The trouble is that we never know when this process began. It may be that in secondary amyloidosis the underlying disorder attracts medical attention and results in an earlier diagnosis. Moreover, secondary amyloidosis may wax and wane with the course of the underlying disease. Secondary amloidosis may regress with effective treatment of the associated disease. There, it is essential to seek a possible underlying disorder in all cases of amyloid.

## Clinical Diagnosis

Dr. Finkelstein: Amyloidosis of liver and kidneys.

## Pathology Discussion (Autopsy 6002)

Dr. Smith: Autopsy examination revealed amyloidosis of the tongue, heart, liver, spleen, kidneys, adrenals, pancreas, lymph nodes, skeletal muscle, bone marrow, and parathyroids. The right and left kidneys weighed 300 and 250 Gm respectively, and both were large, firm, and pallid. On section, the glomeruli were regularly enlarged and displayed massive amyloid deposition as shown in figure 1. Death was attributed to renal impairment from this bilateral process. There were no hydronephrosis, ureteral dilatation, or pyelonephritis on either side.

The liver weighed 4,100 Gm. The shape was normal, the surface smooth, and the tissue firm, pale red, and waxy (Figure 2). Histologic examination revealed massive infiltration with pressure atrophy of epithelial cells lining the hepatic sinosoids (Figure 3). It is astonishing that this massive uniform deposition of amyloid failed to reduce noticeably the function of the organ.

The amyloid deposit was also pronounced in the spleen, which weighed 200 Gm, and in the lymph nodes which were nearly obliterated by the process. The deposition was much less in the tongue which was not noticeably enlarged, and in the heart, which weighed 375 Gm. Minute foci were also seen in the bone marrow. A plasma-cell hyperplasia, however, was not found. Three parathyroids were identified; all measured 0.3 × 0.3 × 0.1 cm, and all revealed amyloid deposition. The right and left lungs weighed 900 and 875 Gm respectively, and both displayed passive hyperemia and pulmonary edema.

From these observations it is apparent that this case should be regarded as that of primary amyloidosis, since heart, tongue and skeletal muscle

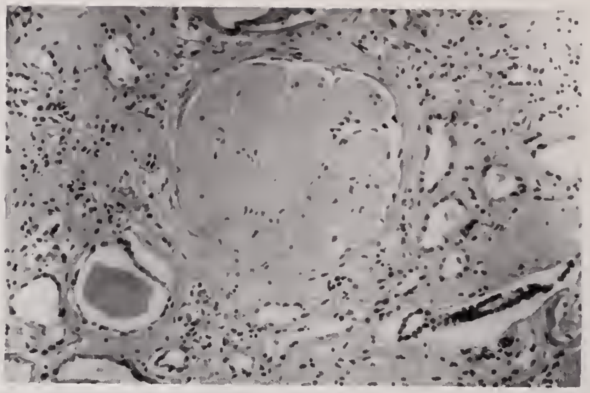


FIG. 1. Massive amyloid deposit in glomerulus.

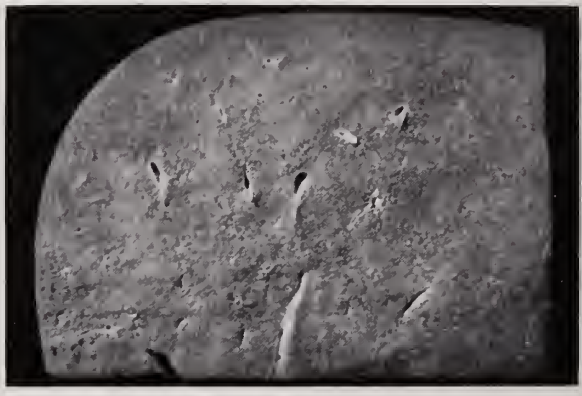


FIG. 2. Cut surface of the liver.

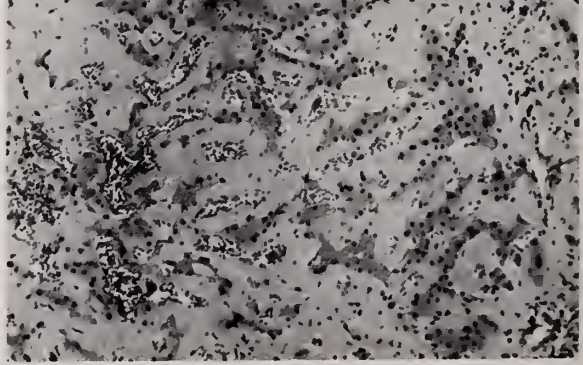


FIG. 3. Amyloid deposit in liver with pressure atrophy of hepatocytes.

are involved, and since a suppurative process was not identified at autopsy. I am not certain of the usefulness of such a classification, because it appears, as Dr. Finkelstein has pointed out, that any distribution of deposits may occur regardless of whether the case is "primary" or "secondary". It is nevertheless astonishing to observe such a massive process that is so widespread in the tissues and at least appears to have arisen de novo. It is also of considerable interest that the process may have been active for a period of nearly 20 years.

Dr. Rosenbaum: Does the amyloid in the parathyroids bear on the calcium and phosphorus values in the serum?

Dr. Smith: The high phosphorus is, of course, attributable to the gradually progressive renal failure. That would ordinarily be expected to lower the serum calcium and subsequently to stimulate the parathyroids so that a hypercalcemia would eventually ensue. The amyloid deposited in the parathyroids may have prevented this compensatory hypertrophy with hypercalcemia.

Dr. Rosenbaum: Would you care to make a concluding comment, Dr. Finkelstein?

Dr. Finkelstein: This case illustrates the importance of considering the diagnosis of amyloidosis in another unusual setting. I am impressed by the meagre eveidence of hepatic dysfunction despite massive involvement of the liver.

## Anatomic Diagnoses

Amyloidosis of tongue, heart, liver, spleen, kidneys, adrenals, pancreas, lymph nodes, skeletal muscle, bone marrow, and parathyroids.

Edema and passive hyperemia of lungs.

Uremia (clinical).

# President's Page

## VICTIMS OF RAPE

Our eyes have been opened to the unsatisfactory way in which rape victims are being handled in the District of Columbia. This was called to the community's attention, when one of Maryland Congressman Lawrence J. Hogan's constituents became the victim of rape while in this city. The sequence of events that followed would have been suitable for the Keystone Cops had not the subject matter been of such seriousness.

Currently, most rape victims are referred to D.C. General Hospital for examination. D.C. General has been cooperative in dealing with this problem by providing a private examination area, and also attempting to offer evaluation and treatment with the least amount of delay. Unfortunately, these procedures are not always carried out smoothly, and considerable additional emotional trauma is suffered by the victim.

Further inquiry has revealed that, in addition to D.C. General, several other of our city's hospitals have been and are currently willing to accept these individuals for examination. However, despite adequate facilities and a competent staff, there are still many facilities here which do not provide this service. In many instances, individual physicians do not wish to become involved because of the possible legal implications—i.e. they might be called to court for testimony as a witness.

I have discussed this problem with our legal counsel, Mr. Lewis Smith, Dr. William Washington of the Department of Human Resources, and several members of the legal establishment. I have further discussed this problem with various members of the Medical Society in the field of Obstetrics and Gynecology, as well as representatives from the emergency rooms throughout the city. I am left with the feeling that there is a great willingness on the part of various individuals, organizations and hospitals to develop a city-wide method of dealing with this problem—and even preferably a metropolitan policy, since so often jurisdictional lines are crossed.

There are many complexities involved in working toward a final solution to this problem. It is, however, incumbent upon the medical profession to work in the best interests of the unfortunate victim. Certainly, every facility with an emergency room should become a part of the effort to improve the unacceptable and often tragic way in which victims of rape are currently handled in the Washington area.

Marvin C. Korengold

Campbell's Soups...
wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help—for these four very good reasons:

**Appeal** With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

**Nourishment** Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

**Convenience** Within 4 minutes a bowl of delicious soup is heated and ready to eat.

**Economy** Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

Campbell's
CONDENSED
SOUP

# You Can't Blame a Girl...

(when her
husband's
at fault)

# Flagyl® brand of metronidazole

# Cures Trichomoniasis in Both Women and Men

About half of all husbands of infected women harbor *Trichomonas vaginalis.**

Few of these men have symptoms. Even so, all are capable of perpetuating the infection and rendering treatment of a woman alone futile.

Only a systemically active medication like Flagyl is capable of reaching the hidden reservoirs of infection in the genitourinary tracts of both men and women.

Only Flagyl has been able to achieve rates of cure consistently above 90 per cent and often up to 100 per cent in trichomonal infections in both men and women.

*Indications:* For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture.

*Contraindications:* Evidence of or a history of blood dyscrasia, active organic disease of the central nervous system and the first trimester of pregnancy.

*Warnings:* Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

*Precautions:* Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

*Adverse Reactions:* Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia,* exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

**Dosage and Administration:** *In the Female.* One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

| **Dosage Forms:** | | |
|---|---|---|
| | Oral tablets . . . | 250 mg. |
| | Vaginal inserts . . | 500 mg. |

*References available on request.

SEARLE
P. O. Box 5110
Chicago, Illinois 60680

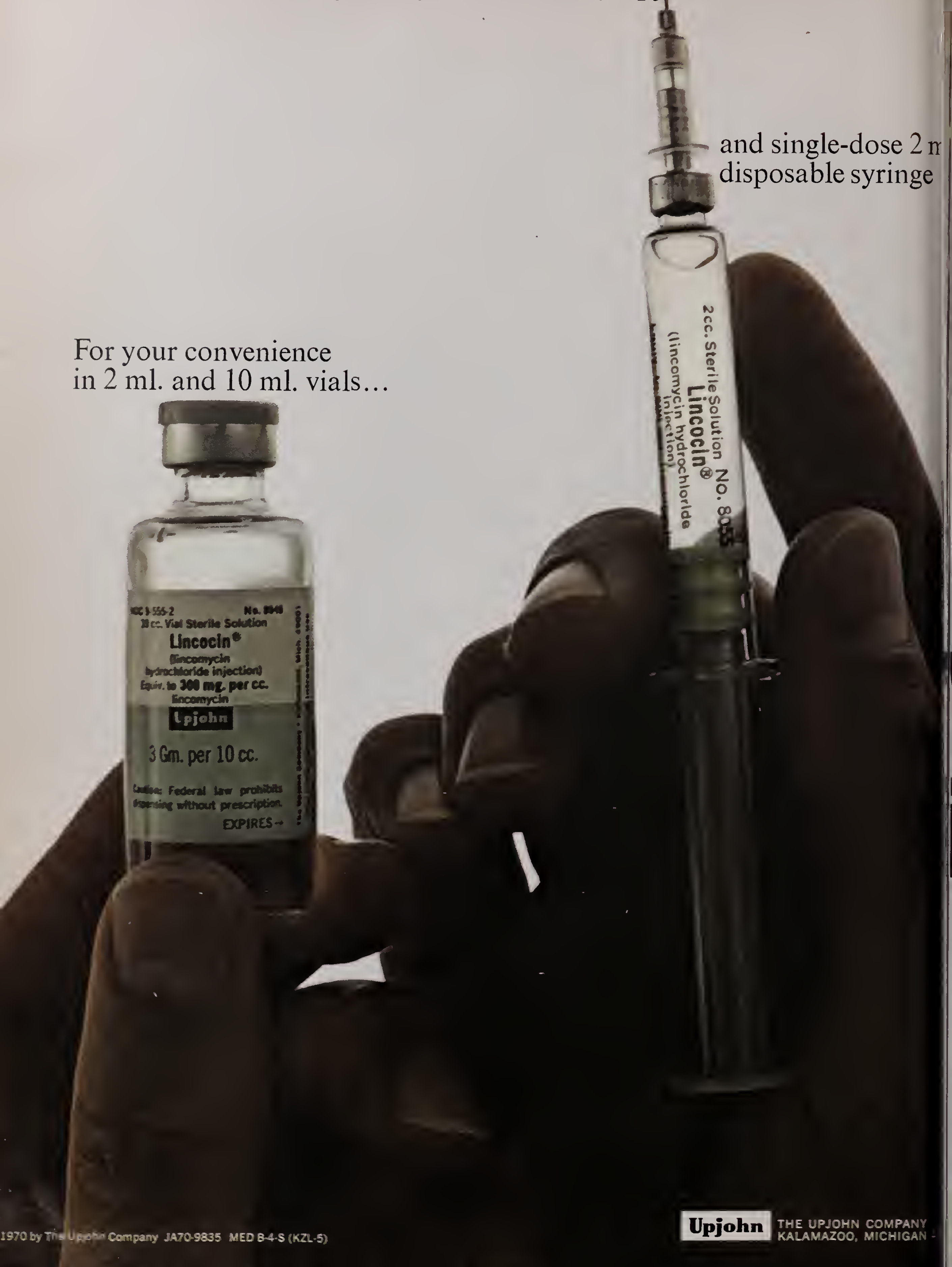
942

*Research in the Service of Medicine*

sterile solution (300 mg per ml.)

# Consider Lincocin®

(lincomycin hydrochloride, Upjohn)


10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES→
2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride injection)

For your convenience
in 2 ml. and 10 ml. vials...

and single-dose 2 m
disposable syringe

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN

1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

U.S.S.R
CHINA
INDIA
SAIGON
INDONESIA
AUSTRALIA

"Around the World in 80 Days"...

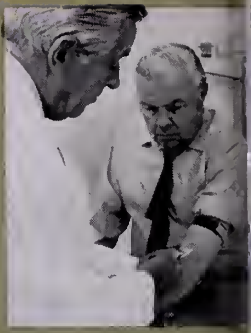
. . .An expense-paid trip with one hitch -- a 60-day hitch in a South Viet Nam civilian hospital delivering vitally needed medical care to the people of South Viet Nam.

American physicians are urgently needed, especially general practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists.

For further information please write to:

**Program Director**
**Volunteer Physicians for Viet Nam**
**American Medical Association**
**535 North Dearborn Street**
**Chicago, Illinois 60610**

*in stable adult diabetes, if diet alone fails...*



# start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

---

*A Distinctive Oral Hypoglycemic*

---

# a biguanide... not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

# DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

# lowers elevated blood sugar

**ow to prescribe DBI®-TD (phenformin HCl)**

**start with DBI-TD**

**Week 1** 1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal.

**Week 2** Continue effective DBI-TD dosage.

If necessary, add an additional capsule to the A.M. or P.M. dose.

**There-after** Continue effective DBI-TD dosage.

**To transfer from sulfonylurea therapy to DBI-TD alone:** The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

**To transfer from sulfonylurea therapy to combined therapy with DBI-TD:** The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

**ications:** Stable adult diabetes mellitus; sulfonylurea fail-
s, primary and secondary. **Contraindications:** Diabetes mel-
s that can be regulated by diet alone; juvenile diabetes that
ncomplicated and well regulated on insulin; acute compli-
ions of diabetes (metabolic acidosis, coma, infection, gan-
ne); surgery; severe hepatic disease; renal disease with
mia; cardiovascular collapse, after disease states associated
n hypoxemia. **Warning:** Use during pregnancy is to be avoided.
il adequate data on the effects of DBI on the human fetus
available, such use can be considered experimental. **Pre-
tions: Starvation Ketosis,** which must be differentiated
n "insulin lack" ketosis, and is characterized by ketonuria
pite of relatively normal blood and urine sugar, may result
n excessive DBI therapy, excessive insulin reduction or
fficient carbohydrate intake. Adjustment of DBI-TD or
lin dosage, or supplying carbohydrates, alleviates this
e. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING
OD AND URINE SUGARS. **Lactic Acidosis:** DBI is not rec-
mended in the presence of azotemia or in any clinical situa-
that predisposes to sustained hypotension that could lead
ctic acidosis. To differentiate lactic acidosis from ketoacido-
it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331. Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV

# Where has all the money gone?

It just goes.

You shake your head.

You see it slip out of your hands and you worry.

Instead of worrying, why not do something about your money? Save some. Painlessly.

Join the Payroll Savings Plan where you work.

Your money will add up faster than ever before, because now there's a bonus interest rate on all U.S. Savings Bonds. Now E Bonds pay 5½% when held to maturity of 5 years, 10 months (4% the first year). That extra ½%, payable as a bonus at maturity, applies to all Bonds issued since June 1, 1970 . . . with a comparable improvement for all older Bonds.

Get a grip on your money the Payroll Savings way. It's an easy way to see your money grow instead of go.

50
THE UNITED STATES OF AMERICA
FIFTY DOLLARS
SERIES E
L 0 000 000 000 E

Bonds are safe. If lost, stolen, or destroyed, we replace them. When needed, they can be cashed at your bank. Tax may be deferred until redemption. And always remember, Bonds are a proud way to save.

## Take stock in America.

Now Bonds pay a bonus at maturity.

The U.S. Government does not pay for this advertisement. It is presented as a public service in cooperation with The Department of the Treasury and The Advertising Council.

# History of the Medical Society of the District of Columbia

## CHAPTER XII

### An Historic Decision

WHEN THE EXECUTIVE DIRECTOR of the Medical Society received a telephone call in June 1949 from Dr. W. Montague Cobb, chairman of a special committee of the Medico-Chirurgical Society of the District of Columbia, a Negro Medical Society, no Negro physician had ever been elected to membership in the Medical Society of the District of Columbia. Dr. Cobb said that his organization had appointed a special committee to confer with representatives of the Medical Society. Members of the committee were Dr. Cobb, Dr. John Sinclair Perry, President of the Medico-Chirurgical Society, and Dr. Edward C. Mazique. A meeting was arranged at which Dr. John Minor, President of the Medical Society, and the Executive Director were in attendance. Dr. Cobb stated that the purpose of the meeting was to seek membership in the Medical Society for Negro physicians. Other Southern states, he pointed out, had elected them to membership. Dr. Minor said neither he nor the Executive Director could speak for the Medical Society but that he would convey the views expressed to the Medical Society's Executive Board.

Some of the most turbulent incidents in the Medical Society's history revolved about the election of Negro physicians to membership. The first to apply were Drs. C.B. Purvis and A.T. Augusta on June 9, 1869. Although they were declared eligible they failed to receive enough votes to elect them. This aroused a storm of protest in certain quarters and was the beginning, as Dr. Lamb, Medical Society historian, described it, of a "most painful story."

On December 9, 1869, Senator Charles Sumner, the abolitionist statesman, introduced in the Senate the following resolution:

"Resolved that the Committee on the District of Columbia be directed to consider the expediency of repealing the Charter of the Medical Society of the District of Columbia and of such other legislation as may be necessary in order to secure for medical practitioners in the District of Columbia equal rights and opportunities, without distinction of color."

The District Committee, consisting of Senators Sumner, Patterson and Norton, had devised and adopted the resolution.

Senator Sumner stated that his objective was to repeal the Charter of the Medical Society and seek a new charter and organize a new medical society founded on "republican principles."

Dr. S. C. Busey wrote in his "Personal Reminiscences":"The disturbance which began in 1869 and terminated in 1872 was the most angry, turbulent and widespread of any that had occurred. It grew out of the attempts of a small minority of the membership to force admission of physicians of African descent into the Medical Society of the District of Columbia."

On December 29, 1869 the Medical Society appointed a committee consisting of its officers and three members to represent the organization before Congress. At the same time it was ordered that all monies on hand be used to purchase books for a medical library and all property be held in trust by Trustees designated by the Medical Society. This action was taken because of the possibility of the repeal of the Charter.

The Medical Society issued a statement in defense of its action in January, 1870. It was pointed out that the Society's Board of Examiners had licensed not only white but Negro physicians (the Society was then the licensing body in the District of Columbia); that its activities had been confused by those of the Medical Association of the District of Columbia, a voluntary association which adopted regulations governing medical practice, and that the "privilege of medical society membership is merely a privilege of association and social reunion and it is for entrance into social reunion that friends of colored physicians are clamorous . . ."

The Medical Department of Howard University had been founded in 1868. Some of its white faculty members had been expelled from the Medical Society for participating as teachers in that institution. This brought about further angry protests.

In his book, "The First Negro Medical Society", in a chapter entitled the "Door Stayed Closed", Dr. Cobb stated that the Medical Association of the District of Columbia was a "dummy" organization. He quoted from the report of the Senate District Committee:

"By a supplementary process of metamorphosis, the 'Medical Society' changes itself into what is called the 'Medical Association' with the same officers, but subject to a series of 'regulations' through which certain restrictions are established, plainly inconsistent with the Charter . . . By these 'regulations' the members of the Association are members or licentiates of the Medical Society, who 'having produced satisfactory evidence of qualifications' receive on ballot the votes of the majority of the members present, and, on election, subscribe to the 'regulations' of the Association."

Cited in the report was the following article in the regulations:

"No member of this Association shall consult with or meet in any professional way any resident practitioner of the District, who is not a member thereof, after said practitioner shall have resided six months in said District."

However, repeated efforts to repeal the Charter failed. The decisive battle now switched to the American Medical Association because the minority group had failed in its goal to make the Medical Society accept Negro physician members.

Undoubtedly, the failure of another Negro physician to be elected to membership caused Senator Dolph to introduce a bill in 1892 which would repeal the Charter. The Senate passed a resolution instructing the District Commissioners to inquire into the situation and report whether the Medical Society admitted colored physicians or physicians who were or had been teachers at Howard University. The Senate District Committee later reported that the Medical Society did not admit Negro physicians to membership, however qualified or reputable they might be, and that as regards teachers in the Medical Department of Howard University, some were admitted and others rejected. This apparently disposed of the matter because no further action was taken.

The Medico-Chirurgical Society of the District of Columbia had been organized in 1884, but because of the indifference of its members had to be revived in 1895.

However, as Dr. Cobb pointed out, a segregated minority is handicapped as a power in the community. It was not surprising therefore that lethargy had developed among its members.

One highly regarded Negro candidate with influential backing applied for membership in the Medical Society in 1894, but he also failed to be elected.

In 1949 these events were ancient history. It was in June of that year, that the Executive Director of the Medical Society received a call from Dr. Cobb resulting in a meeting of the representatives of the two medical societies. As promised, Dr. Minor and the Executive Director discussed the conference which they had had with the Executive Board. On November 5, 1949, Dr. Cobb inquired by letter what decision had been reached. On instruction of the Executive Board the Executive Director wrote Dr. Cobb that the Board had reached no decision but as soon as it did he would be notified. This communication, together with Dr. Cobb's, was published in the *Bulletin* of the Medico-Chirurgical Society and they found their way into the Washington newspapers.

The Executive Board finally appointed a special committee, consisting of Dr. Walter Freeman, President of the Medical Society, Dr. H. P. Ramsey, and Dr. Raymond T. Holden, to meet with Dr. Cobb and his committee for the purpose of exploring the possibility of reaching a mutually satisfactory solution.

As a result of these meetings the Executive Board voted unanimously to recommend to the Medical Society that invitations be extended to members of the Medico-Chirurgical Society to attend scientific meetings and that a joint committee be established consisting of representatives of the Medical Society and of the Medico-Chirurgical Society to "devote its attention to community health projects in which both groups had a logical interest."

At the Medical Society business meeting in March 1950 the Executive Board prefaced its recommendations by directing attention to the friendly relationship between the two Medical Societies. The Board stated that during World War II the Medico-Chirurgical Society was represented on the Procurement and Assignment service of Physicians for the Armed Forces and more recently on a committee to select a new Health Officer for the District.

At about this time a petition was received by the Executive Board signed by members of the Medical Society urging that members of the Medico-Chirurgical Society be invited to attend the 18th Annual Scientific Assembly (1947). The Board voted that not only members be invited but also the medical students of Howard University. Similar invitations were extended for the 19th and 20th Assemblies.

All of the Executive Board recommendations had been approved up to this time. The Board reported to the Society in March 1951, that at meetings of the joint committee the question of membership of Negro physicians in the Medical Society was coming up frequently. This seemed to the Board a propitious time to ascertain the Society's reactions to such a proposal. An opinion poll was proposed and approved by the Society. It was undertaken in March 1951. Members were asked the question: "Are you in favor of the election of qualified Negro physicians to membership in the Medical Society of the District of Columbia?" Results of the poll were as follows:

Letters mailed to 1,381 Life and Active members
Returns received from 966
674 said "Yes"
200 said "No"
2 votes were qualified and not counted.

Immediately four Negro physicians applied for membership. The Executive Board notifice the Board of Censors of the results of the poll without comment. The Board of Censors handled the applications of the Negro physicians in routine fashion but took the position that although the Constitution and By-Laws did not prohibit their election or the election of any qualified physician, no Negro physician had been elected during 134 years of the Medical Society's existence. The Board of Censors did not consider the poll a mandate for election of the Negro applicants.

The Executive Board thereupon recommended to the Society that a vote be taken on the following resolution: "Resolved, that no qualified physician applying for membership in the Society shall be denied membership because of race, creed or color." Its recommendation was approved.

On April 2, 1952, members voted in the Medical Society building. Ballot boxes were locked, with the keys in the possession of the tellers. However, so few voted—only 271—that the Executive Board decided that because only half of the membership voted the vote should be declared invalid and that a mail vote be taken. The Society concurred, and the ballots of the previous election were destroyed without being counted.

Ballots for the mail poll were sent to the members on May 20, 1952, with a deadline for their return by June 16. The results were as follows:

1,380 ballots mailed to members
1,031 returned
  735 voted "Yea"
  296 voted "No"

All during this period some members were loud in their protestations pro and con. A vocal minority insisted they would resign if Negro physicians were elected. Meetings were held by their leaders in an attempt to organize a white Medical Society but they could not muster enough adherents.

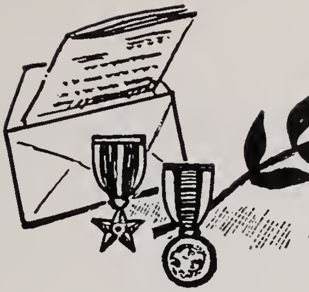
Some of the Southern doctors, but not all, were extreme in their denunciations. Medical Society officials were calm because it was evident that the time had come for election of Negro physicians to membership. Physician-veterans of World War II had more liberal views than their older colleagues, and some said this had much to do with the outcome.

The Observer in the *Medical Annals* for September 1952, wrote:

"No one will deny the historic significance of the action taken by the Society in June 1952.

"The dire consequences predicted by the minority never came to pass; in fact, the ready acceptance of Negro physicians clearly demonstrated their election was overdue. Before long they were serving effectively on important committees of the Medical Society.

"The Society has passed another important milestone in its long history."



# News & Personals

## SUMMARY OF EXECUTIVE BOARD ACTIONS

### Proceedings of the April 26 Meeting

Dinner was served for Board members in the Exhibit Hall of the Medical Society. Present were Drs. Henry D. Ecker, Chairman, Frank S. Bacon, James E. Boland, Warren D. Brill, C. Willard Camalier, Jr., John J. Hughes, Marvin C. Korengold, Frank S. Pellegrini, and F. P. Ferraraccio, Secretary. Present by invitation were Drs. Jack Kleh and Philip Philbin, Medical Society of D.C. representatives to the Board of Trustees of the Medical Service of D.C.

The meeting was called to order by the Chairman at 7:15 p.m.

The minutes of the March 22 meeting were approved as submitted.

**Committee Meetings**: The Secretary reported the following committees had met since the last meeting of the Board:

| | |
|---|---|
| March 24 | Child Welfare |
| | Scientific Exhibits |
| April 1 | Medical Bureau |
| | Physician Placement |
| 2 | Occupational Health |
| 6 | Blood Banks |
| | Alcoholism |
| 7 | Smoking & Health |
| 9 | Utilization |
| 12 | Membership |
| April 13 | Medical Ethics & Professional Conduct |
| | Board of Credentials |
| | Medicolegal |
| 14 | Mental Health |
| | Fee Review |
| 15 | Breast Study |
| | Communicable Disease |
| | Continuing Education |
| 19 | Environmental Health |
| 20 | Grievance |
| | Liaison with Allied Professions |
| | Medicine and Religion |
| 21 | Legislative |
| | Drug Abuse |
| | Constitution & Bylaws |
| | Liaison with Medical Schools |
| 22 | Interspecialty |
| 23 | Emergency Medical Services |

**Board of Credentials**: On recommendation of the Board of Credentials 11 applicants were elected to Active membership, 5 to Associate membership, and 3 to Resident-Intern membership. Their names appear on page 404. Approval was given to the following changes in membership status:

*Transfers*

*Active to Associate:* S. Eugene Long
*Active to Special:* H. Franklin Kreuzberg
*Associate to Special:* James N. Greear

*Resignation*

*Associate:* Bonita Peterson

**Medical Service of D.C.**: Drs. Philbin and Kleh explained that the purpose of their attendance at this meeting was to promote and exchange information between Blue Shield and the Executive Board.

It was reported that in 1970 Medical Service paid $72,400,000 in benefits and this represents 94.7% of income. Currently, one-half of the metropolitan population is enrolled in Medical Service. The Federal Employee Program has grown to 60% of Blue Shield's business. It was stated that Medical Service has direct control of claims processing, and payments are now being made on a daily rather than a weekly basis. Mention was made of both the recent reorganization of Medical Service, and the UCR Plan which went into effect in March.

With regard to the future, it was stated that consideration is being given to medical foundations and HMO. Also, Medical Service would like to participate in the planning and financing of medical care services for the future.

A question and answer period followed in which a number of subjects were discussed. There is a particular problem in teaching hospitals where large house staffs write orders. In relation to this problem, data is being collected in regard to repeated laboratory tests, and unnecessarily prolonged hospital stays. In regard to a question on prepaid practice, it was stated that the Rhode Island Plan is becoming an HMO. The problems associated with HMO's were recognized.

After a lengthy discussion on over-utilization, and the various mechanisms available to watch over-utilization, the discussion on the Medical Service of D.C. was brought to a close.

**Finance Committee:** On recommendation of this Committee, the Auditors report was accepted as presented. After discussion of the Constitution and Bylaws in regard to the composition of the Finance Committee, a motion was made and carried that the President, President-Elect, immediate Past President, Chairman of the Board, Vice Chairman of the Board, and Executive Director constitute the Finance Committee. Further, the Committee on Constitution and Bylaws will be so informed in order that appropriate provisions may be made in the Constitution and Bylaws.

**Resignation of Dr. Frank S. Bacon:** The members of the Board accepted with regret Dr. Bacon's resignation and extended their best wishes upon his upcoming retirement.

There followed a brief discussion on the provision in the Constitution and Bylaws regarding a vacancy on the Board.

**Liaison with Allied Professions Committee:** A motion was made and carried to approve the recommendation of this Committee regarding the compilation of a master compendium. The Board approved the recommendation giving RMP the authority to begin the compilation, but RMP is not to distribute the final compendium.

**Letter from Dr. Paul J. Sanazaro:** After discussion of a letter from Dr. Sanazaro regarding a study which compares the hospital and office care received by high-option federal employees under the group health option with that received under the Blue Cross-Blue Shield option, a motion was made and carried to approve the study in principle. The Board authorized the President to discuss the study in more detail with Dr. Sanazaro.

**1972 Scientific Assembly:** After discussion, a motion was made and carried that the 1972 Scientific Assembly will be held at the Greenbrier on October 27, 28 and 29.

**Blood Banks Committee:** After a brief discussion, a motion was made and carried to approve this Committee's recommendation that the minimum age for blood donors be lowered from 21 years to 18 years of age, not requiring parental consent, provided this complies with the D.C. Statute.

### Other Business

1. **Panel of Experts for Court Trials:** After a discussion regarding the use of a panel of physicians who would give expert testimony in negligence cases, a motion was made and carried to approve this in principle and ask the Medicolegal Committee for its recommendation.

2. **Emergency Medical Service Committee:** A motion was made and carried to accept the recommendation of this Committee that the Medical Society of the District of Columbia support the change in the District budget which permits audited cost reimbursement for hospitals participating in the Medical Charities Program.

3. **Legislative Committee:** A motion was made and carried to approve the recommendation of this Committee regarding changing the wording in the amendment to P.L. 91-222 to read ". . . may contribute to . . .". The Board did not approve that portion of the recommendation dealing with introduction of this amendment as a resolution by our delegates at the June AMA convention.

There being no further business the meeting was adjourned at 10:30 p.m.

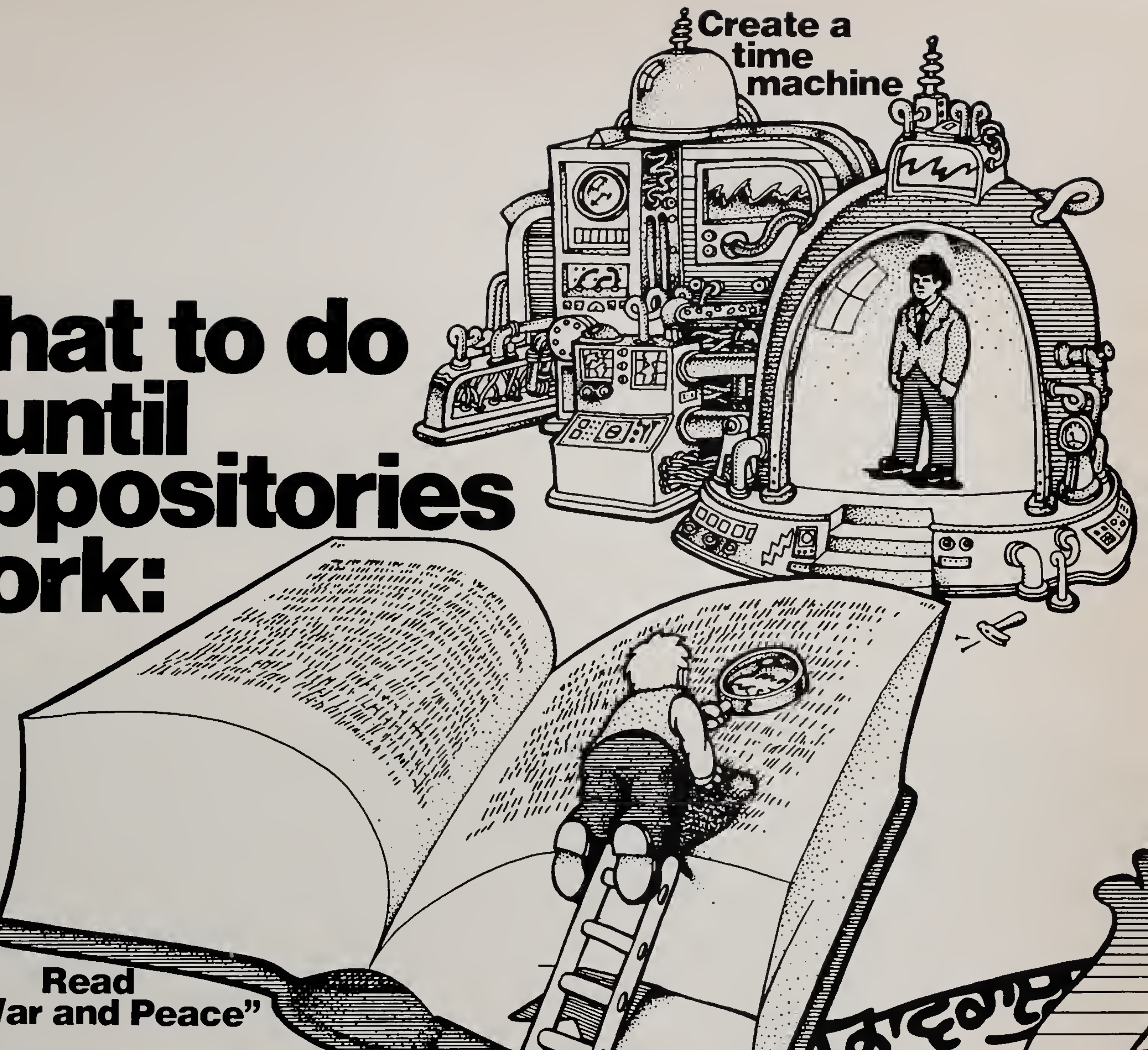
THE BALANCED RETIREMENT PLAN

A KEOGH ACT PROGRAM with a wide range of both guaranteed and equity investments. Pension and profit-sharing plans for professional corporations also available on a group basis.

Co-sponsored by the Medical Society of the District of Columbia
For information call or write--

Suter Associates Retirement Planning Company

2545 Wilson Blvd. Arlington, Virginia 22201
*Telephone:* 525–6700



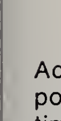
# What to do until suppositories work:

Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.



C. B. FLEET CO., INC.
Lynchburg, Va. 24505

Fleet pharmaceuticals

**Warning:** Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present. **Caution:** Do not administer to children under two years of age unless directed by a physician.

**References:** 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.

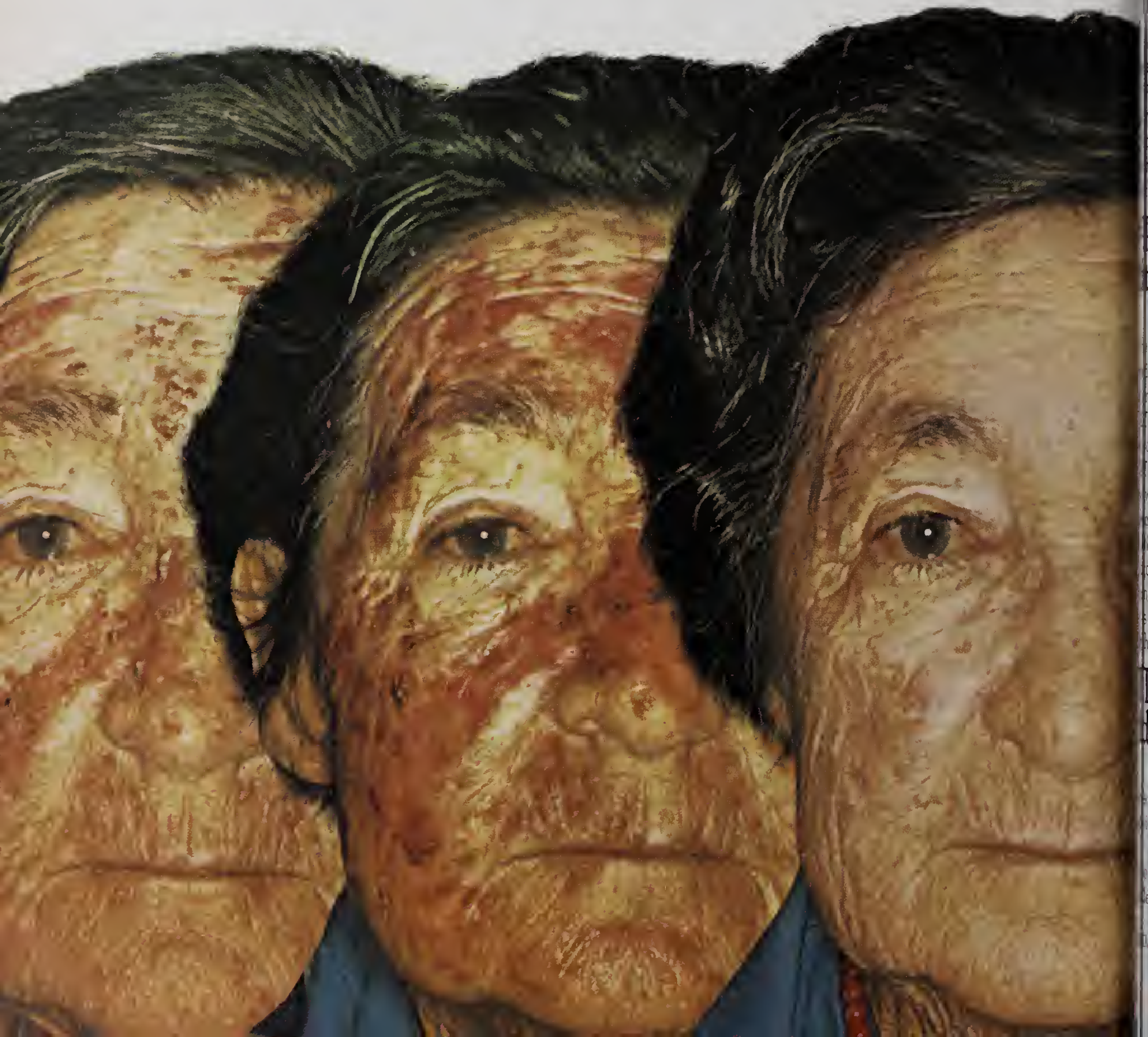
Efudex®
(fluorouracil)
cream/solution

In the treatment of solar/actinic keratoses-
An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completel
Residual mild erythema remains in som
areas. This patient also had seborrheic
keratoses which, as expected, have not
reacted. There is no evidence of residua
lesions or recurrences.



ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

\n alternative
o conventional therapy

Efudex (fluorouracil) offers the physician a )pical alternative to cryosurgery, electrodesiccation 1d cold-knife surgery in the treatment of solar/actinic eratoses. It is effective, comparatively inexpensive and specially well suited for treatment of these multiple sions. Important, too, is the highly desirable cosmetic sult. Clinical experience demonstrates that treatment ith Efudex results in an extremely low incidence of arring.*

Highly effective

In clinical trials, depending on the dosage form 1d strength used, complete involution occurred in 7 to 88 per cent of lesions following treatment. The te of recurrence was low, ranging from 1.7 to 5.6 per nt up to a year after completion of therapy. When ew lesions appeared, repeated courses of Efudex erapy proved effective.*

Predictable
herapeutic response

Two to four weeks constitutes a typical course Efudex therapy. The response is usually characteris- and predictable. After three or four days of treat- ent, erythema begins to appear in the area of keratoses. his is followed by an intense inflammatory response, aling and occasionally moderate tenderness or pain. e height of the inflammatory reaction generally occurs o weeks after the start of therapy, and then begins subside as treatment is stopped. Within two weeks of scontinuing medication, the inflammation is usually ne. A mild erythema may remain for two or three onths before gradually receding. Since this response so predictable, lesions which do not respond ould be biopsied.

wo strengths—two
osage forms

Efudex is available as a 2% or 5% solution or a 5% cream. It is applied twice daily by the patient th a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two im- rtant considerations: First, please consult the com- ete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

ata on file, Hoffmann - La Roche Inc., Nutley, New Jersey.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

25 Gm
EFUDEX®
TOPICAL
CREAM 5%
fluorouracil
ROCHE
Item #2630
NDC-4 1506 03

new
Efudex®
(fluorouracil)
cream/solution

**Thorazine®**

brand of chlorpromazine

**versatility**
**quality**
**experience**

NOW
THERE'S PRICE

Smith Kline & French Laboratories SK&F

# D.C. HEALTH NOTES

## Results of Health Screening

A total of 12,320 persons in the District of Columbia during 1970 took advantage of the free health tests offered by the D.C. Community Health Services Administration through its multiphasic screening program. The number was an increase of 2,053 over the previous year.

About 7,800 or 64% of the 12,320 persons examined were found to have one or more possible abnormalities. These were referred to the person's private physician for further evaluation and treatment, if necessary. The number of diagnoses made by private physicians for patients sent to them during 1970 is not yet available.

In 1969, a total of 10,267 people were examined at the two facilities—Area C Health Center and Mobile Health Unit—6,116 or nearly 60% were found to have possible abnormalities. Of these referrals almost 75% or 4,574 patients were confirmed by physicians as having at least one abnormal condition.

The free examinations are available to all District residents, 21 years of age and older, at Area C Health Center, 1905 E Street, S.E. and the Community Health Services Mobile Unit, which is stationed at various locations throughout the District of Columbia.

Of the 10,267 persons examined in 1969, 6,061 were screened at Area C Health Center and 4,206 in the Mobile Unit. The reverse was true in 1968 when 6,209 were examined in the Mobile Unit and 4,466 persons at the Area C Health Center. The difference was due to the fact that the Mobile Unit was out of operation between October, 1969 and February, 1970.

According to the screening results, the % "abnormal" ranged from a high of 63.9 for audiometry to a low of 0.2 for neoplasm. More previously unknown abnormal conditions were detected by the spirometry test than any other test. Of the total physicians' evaluations received for each abnormal test referred, hemoglobin was the most frequent condition reported as confirmed abnormal, previously unknown.

Due to abnormal blood sugar level, 796 persons were referred to private physicians or clinics in 1969. Of that number we received 741 evaluations from physicians and found that a higher proportion of the referred patients aged 65 and over were confirmed as abnormal than those referred who were under 65 years of age.

In tests for hemoglobin and EKG, the proportion of confirmed abnormal, previously unknown, decreases as the age increases. This may be due to a greater proportion of the senior citizens having regular annual physical examinations and/or having visited their physicians for a specific symptom.

Private physicians confirmed 447 serology tests as abnormal and listed 431 cases of syphilis and other venereal diseases. However, most of the cases were previously known and are under medical care. Diseases of the eye and of the cardiovascular system were found most frequently during the year. In these two categories, except blindness, over 50% of the patients were placed under medical care.

The objectives of the Multiphasic Screening Program are (1) Detection of previously unknown chronic diseases in apparently-well residents, (2) Identify those who are under either no medical care or inadequate care for previously-known chronic conditions, and (3) Refer persons with suggested abnormalities to a physician of their choice for further evaluation and treatment.

The health screening, which takes between 30 and 45 minutes includes tests for hearing and vision, blood pressure, chest x-ray, electrocardiogram, height and weight, and for women, a "pap" test for the detection of cervical cancer.

Con-
ven-
ience!

Dicarbosil®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

# NEW MEMBERS

## Active

BRUNO AMADEO, M.D. Office: Cafritz Hospital. Born in Beirut, Lebanon. Medical degree: French University, Beirut, 1958. Specialty: Pathology.

NORCLIFFE E. BROWN, M.D. Office: Freedmen's Hospital. Born in Jamaica, West Indies. Medical degree: Howard University, 1965. Specialty: Internal Medicine.

HARVEY MARTIN COHEN, M.D. Office: 730 24th Street, N.W. Born in New York City, New York. Medical degree: State University of New York Downstate, 1961. Specialty: Orthopedic Surgery.

PAULO E. FRANCO, M.D. Office: Georgetown Surgical Division, D.C. General Hospital. Born in Bogota, Columbia. Medical degree: University of Antioquia Medical School, 1960. Specialty: General Surgery.

ULRICH K. HENSCHKE, M.D. Office: Freedmen's Hospital. Born in Berlin, Germany. Medical degree: University of Berlin, 1939. Specialty: Radiotherapy.

MEHDI JANDAGHI, M.D. Office: 2811 Pennsylvania Avenue. Born in Kerman, Iran. Medical degree: Teheran Medical School, 1956. Specialty: Obstetrics-Gynecology.

GERALD E. KESSLER, M.D. Office: 1325 Upshur Street, N.W. Born in New York City, New York. Medical degree: Albert Einstein College of Medicine 1962. Specialty: Internal Medicine.

MASSOUD MAJD, M.D. Office: Children's Hospital. Born in Iran. Medical degree: University of Teheran, 1960. Specialty: Radiology.

NICHOLAS MENDJUK, M.D. Office: Freedmen's Hospital. Born in Kiew, Russia. Medical degree: University of Madrid, 1964. Specialty: Internal Medicine.

GURBUX NACHNANNI, M.D. Office: 2150 Pennsylvania Avenue. Born in Larkana, West Pakistan. Medical degree: B.J. Medical College, Poona, India, 1962. Specialty: Internal Medicine and Cardiology.

FITZPATRICK WILSON, M.D. Office: Freedmen's Hospital. Born in Trinidad, West Indies. Medical degree: State University of New York Downstate, 1957. Specialty: Obstetrics-Gynecology.

## Associate

KEK TIONG ANG, M.D. Office: Karrick Hall, D.C. General Hospital. Born in Manila, Philippines. Medical degree: University of Santo Tomas, 1963. Specialty: Radiology.

TSUNIE CHANCHIEN, M.D. Office: Glen Dale Hospital, Glen Dale, Maryland. Born in Taiwan. Medical degree: Kaohsiung Medical College, China, 1964. Specialty: Internist.

MARK A. IMMERGUT, M.D. Office: 10401 Old Georgetown Road, Bethesda. Born in Brooklyn, New York. Medical degree: New York University College of Medicine, 1959. Specialty: Urology.

MARIA MANNARINO, M.D. Office: National Library of Medicine, National Institute of Health. Born in Hamburg, Germany. Medical degree: J.W. von Goethe University, Frankfurt, Germany, 1956. Specialty: Pediatrics.

HARVEY STEINBERG, M.D. Office: Public Health Service. Born in Philadelphia, Pennsylvania. Medical degree: Jefferson Medical College, 1962. Specialty: Psychiatry.

## Resident-Intern

LEROY BERNSTEIN, M.D. Office: 2125 13th Street. Born in Denver, Colorado. Medical degree: George Washington University, 1968. Specialty: Pediatrics.

H. JAMES HOWARD, M.D. Office: Freedmen's Hospital. Born in Washington, D.C. Medical degree: Howard University, 1965. Specialty: General.

NELSON A. VILLAMOR, M.D. Office: 110 Irving Street. Born in San Felipe, Zambales, Philippines. Medical degree: University of the Philipines, 1966. Specialty: Anesthesia.

CAPITAL NURSE REGISTRY
(Est. 1910)
Licensed Practical Nurses and Practical Nurses Recommended by Physicians
All Nurses Have Had Hospital Training
One of Washington's outstanding Registries, serving physicians and surgeons since 1910
LICENSED BY DISTRICT OF COLUMBIA
*24 Hour Telephone Service*
RAndolph 3-2600 or 3-1771

# D.C. MENTAL HEALTH ADMINISTRATION

## Solving Old Problems in New Ways

Jim Johnson's individuality and personal freedom comprise the coins with which he barters for membership in our society. He negotiates a few coins of independence for each role he chooses to play in our society.

As our society becomes more complex his roles increase in number. He negotiates some of his selfhood for membership in a social club, for membership in a church, to his employer, to the Parent-Teacher's Association, to his professional society, to his neighbors, to his intimate friends, to his family, and so on. Each group applies sanctions if his role is not played adequately, and each role is different. He is under constant stress; he must conform.

Jim's problem is that no one in a society is told how much he should pay for societal membership, and out of fear and anxiety, he gives up more than he needs to. He generalizes beyond the requirements. He now plays unnecessary roles in elevators, on the street, in restaurants. Finally, he loses his private identity and fear begins to change into despair. He is gripped by feelings of loneliness and alienation. His roles begin to break down as he no longer can marshall and focus the energy necessary to sustain them. He is now a typical candidate for the services of the District of Columbia's Mental Health Administration.

Jim is not an isolated case. Many studies have shown that when people come together in great numbers and in close proximity stress ensues and personalities break down (Srole et al, 1962; Tunley, 1962; Yablonsky, 1962; Clausen, 1957; Cohen, 1959). In fact, there is an accelerated linearity of mental hygiene problems coincident with a linear increase in urban growth. The problems multiply faster than the city growth rate. Crime, for example, increases in cities in which neighborhood peer group control is necessarily limited or absent. An increase in crime is accompanied by an increase in stress beyond that which is induced by ordinary day-to-day activities. Stress breeds stress. In order to maintain its cohesiveness and productivity, a metropolitan area must rescue its unproductive citizens and make them efficient members of society once again.

Two basic treatment philosophies vie for primacy in any metropolitan mental health administration. These are socio-political: the agency should operate so as to gain the greatest productive efficiency for society, and Humanistic: the agency should operate so as to gain the greatest good for the individual. The philosophy chosen will influence the entire makeup and administration of the agency. The Director of such an agency does not act alone in deciding his agency's philosophical outlook, however.

For example, if the agency chooses to spend great time and effort to recover the advanced psychotic, those with vested commercial interests may well bring pressure to bear in order to create programs of prevention or programs that will emphasize the acute problem instead of the chronically ill-programs that will get the man back on the job and into productivity.

The agency that de-emphasizes the chronic problem is certain to run into the influential citizen who has one such problem in his family and who can put his social muscle to bear in getting increased services for the chronic schizophrenic patient.

Most agencies, including the District of Columbia's, must unrealistically combine the 2 philosophies and choose neither; why is this unrealistic? It is because money is not and can not be made available for such broad programs; personnel for such programs simply are not available in the nation and present training schemes will barely keep up with burgeoning demands; the same taxpayer who makes differential demands on the system will not support a system combining his and someone else's philosophy; and, as mental health problems increase disproportionately with the population so do the problems in every other service sector such as waste disposal, transportation or welfare programs. There can never be enough money to go around as demanded by the limits of current service technology.

Once funds are obtained, however limited they may be, another problem faces such an agency; people tend to stay within their neighborhood in implementing their needs. They will buy food at local grocery stores, go to local doctors when ill, attend local schools by preference, attend local churches, and seek out only those Government services that are close at hand. For example, many of the poor will not go a central depot to claim free surplus food that is available to them; free food must be brought to them, or at least to their neighborhood. Similarly, mental health services that are not available locally will not be pursued by many who need them most.

The other side of this problem is that only a centralized administration can spend the funds available in anything like an efficient manner, distributing personnel and other resources to the greatest advantage of the overall program. The D. C.

Mental Health Administration has solved this problem in the following ways.

Serving as a separate administrative service within the Department of Human Resources, itself one of the 35 or so Departments within the District of Columbia Government organization, the Mental Health Administration is divided into 3 functional bureaus which provide services to the mentally and emotionally ill, to the alcoholic and to those with developmental problems, and to those with acute emotional problems of any and all kinds.

Services are localized within the community through area health program organizations in which each of 4 major areas of the city contain a central service core with outreach programs that encompass every segment of each urban region.

Several consolidated facilities allow for intensified treatment of mental retardates, alcoholic inpatients and the mentally ill. In these cases, area programs serve as funnels for channeling patients into the programs and for follow-up care when indicated.

Patients serviced can be divided behaviorally into categories as follows:

I. *Chronic.* Individuals who need chronic mental health care, i.e. for those who have a reasonably stable pattern of maladaptive responding to their environment so as to render them relatively incompetent to function constructively within their personal and social milieu. In terms of planning, certain priorities of treatment are suggested:

1. Top priority for those individuals under so much stress that they cannot focus their energies for achieving basic needs, e.g., food, shelter, warmth, and other fundamentals.

2. Second priority to those whose behavior is so sufficiently maladaptive to interfere with adequate functioning with others or whose behavior creates stress or threats for others.

3. Those, who while meeting their basic needs, are not meeting their personal and psycho-social needs, e.g. for those who do not fulfill their own needs for recreation, involvement of self in groups, experiences in the community, or sources of esteem for themselves or others.

II. *Acute.* Acute programs for individuals suffering from situational or temporary maladaptations, analogous to chronic situations enumerated above in I. All mental health programs can be grossly divided into such categories as these, but the order of priority of treatment will be exactly reversed, depending on the philosophy of the department. Further, each category above can be divided into acute or chronic conditions and their treatment again subjected to departmental philosophy.

The District's philosophy has been historically provided by the U.S. Congress. Currently it is diffuse; all areas of need, as well as all intensities of need, are being treated simultaneously with the resources available. That means that no one treatment modality is presently adequate. It also means that Congress, if it wishes to maintain this approach to such problems within the District will have to put up the funds. It is not now doing so. The most important tasks now facing this Administration can be summarized in terms of service goals.

First, we want to bring all community resources to bear, together with our own, to meet the needs of the community. These are rich and varied and include several topflight medical schools, many public and private agencies, and a plethora of knowledgable individuals who virtually surround us in the seat of national government.

Second, we want to continue our efforts at innovative programming, based, when possible, on adequate research. This will enable the District to handle adequately problems that have never been properly dealt with in its long history, such as sound preventive practices, the care and handling of juvenile clients, the proper treatment for both inpatient and outpatient cases, and adequate follow-up of all categories of patients.

Finally, we see mental health work as an art-an art which preys on the scientific result whenever possible. Artists must be innovative, however, or they cease to be great artists. We in the District of Columbia's Mental Health Administration intend to be artists of the highest caliber. So you can tell Jim Johnson we are on our way.

ESSEX C. NOEL III, M.D.
*Director, D.C. Mental Health Administration*

Serving as technical and research assistants for this series of articles are Dr. James A. Vanderpool and Dr. Ray D. Smith.

## References

CLAUSEN, J. D.: Social Patterns, personality and adolescent drug use. In A. LEIGHTON, J. A. CLAUSEN, and R. N. WILSON, (Eds.), Explanations in Social Psychiatry. New York: Basic Books, 1957.

COHEN, A. K.: The study of social disorganization and deviant behavior. In R. K. MERTON, L. BROOM, and L. S. COTTRELL, JR. (Eds.), Sociology Today, New York: Basic Books, 1959, 461-484.

SROLE, L., LANGNER, T. S., MICHAEL, S. T., OPLER, M. K., and RENNIE, T. A. C.: Mental Health in the Metropolis: The midtown study. Vol. 1. New York: McGraw-Hill, 1962.

TUNLEY, R.: Kids, Crime and Chaos. New York: Harper, 1962.

YABLONSKY, L.: The Violent Gang. New York: Macmillan, 1962.

*The Annual*

# "DR. PHILIP BURKA AWARD AND CITATION"

in recognition of the best original
Medical Papers
*prepared by*
Residents and/or First Year Fellows
*in*
Washington Metropolitan Area Hospitals

*Awards are sponsored and presented by:*
The Medical Society of the District of Columbia

## 1st Award—$500.00 2nd Award—$300.00 3rd Award—$100.00

## HONORABLE MENTIONS (2)—$50 EACH

**Deadline for submission of papers to The Medical Society of D. C.**
**JULY 31, 1971**

---

1. Participants shall be limited to Residents and/or First Year Fellows of Washington Metropolitan Area Hospitals. This includes: District of Columbia; Montgomery County; Prince Georges County; Arlington County; Alexandria County; and Fairfax County.
2. Papers must be original and based upon actual study and/or research conducted solely by the eligible participant. Acknowledgment may be noted for guidance and assistance given to the author PROVIDED these individuals are not co-authors.
3. Photographs and drawings may accompany the manuscripts. They must be carefully marked and show clearly what is intended.
4. An original and one copy, typed and double spaced are required when submitting papers for judging. Papers submitted to the judges by the Medical Society will be circulated without the author's name or institution of origin. Bibliographies will be required.
5. All papers submitted for judging *may* be published in the Medical Annals of the Medical Society of D. C., at the discretion of the Editorial Board. If published, the papers will become the property of the MEDICAL ANNALS. Papers may be reproduced by copyright upon direct request.
6. Papers not chosen for publication may be returned, upon request, to the author.
7. Authors of winning papers will be presented cash awards and citations by the Medical Society of the District of Columbia. Authors will be notified as to the date, time and place of the presentations.
8. For additional information and the submission of papers please write or contact:

**The Medical Society of D. C.**
**"Dr. Philip Burka Award & Citation Committee"**
**2007 Eye Street, N.W.**
**Washington, D. C. 20006**
**Telephone: (202) 223-2230**

RMK

*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

**DataMedics**

**The result is total management control & increased cash flow**

DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:

- Billing
- Bookkeeping
- Collecting delinquent accounts
- Designing offices
- Leasing equipment
- Preparing insurance claim data
- Preparing payroll tax data
- Recruiting personnel
- Training personnel

**How?**
Consultation by appointment.

DM

**DataMedics, Inc.**
**National Headquarters**
**7979 Old Georgetown Road**
**Washington, D.C. 20014**
**(301) 654-7666**
**Cable/Medic**
**Baltimore (301) 792-4424**

**MAXWELL**
**AND**
**TENNYSON**
**INC.**

M&T

*Pharmacists*

916 19th. St. N.W., Washington, D.C.

"WHERE PHARMACY IS A PROFESSION"

BIOLOGICALS • VACCINES • SERUMS •
HYPO-ALLERGENIC COSMETICS •
ORTHOPEDIC APPLIANCES AND GARMENTS
(QUALIFIED FITTERS)
INHALATION THERAPY AND
ELECTRIC AIR PURIFIERS
(QUALIFIED INHALATION THERAPIST)

**CONVALESCENT AIDS**

AVAILABLE FOR RENTAL OR SALE

**Phone 223-4711 or 223-9797/8**

**HOURS:** 8 am to 7 pm—Mon. Thru Fri.—Sat. 8 am to 2 pm
**CLOSED** Sunday and Holidays

# Book Reviews

**The Immunology of Malignant Disease.** JULES E. HARRIS and JOSEPH G. SINKOVICS. Price, $15.00 Pp 251, with illustrations. St. Louis: Mosby, 1970.

This is an extremely well written book "intended for clinicians concerned with the management of malignant disease". The contents of the book range from a discussion of the normal immune response in man and his reactions to malignant disease as well as the immunology of tumors in experimental animals. These sections are followed by a discussion of specific immune deficiency states associated with human neoplastic diseases as well as the action of certain chemotherapeutic agents commonly used in the treatment of malignant diseases. A summary of the etiologic agents causing tumors in man and attempts at immunotherapy conclude the book.

Throughout the text are many references to the authors original contributions to the field of immunology of malignant disease and serves to emphasize their competence in dealing with the subject matter of this book. The bibliography is most complete and should be useful to the research oriented as well as the clinician.

THOMAS L. HARTMAN, M.D.

**Ocular Pharmacology**, 2nd edition. WILLIAM H. HAVENER, M.D. Price $29.50. Pp. 556, with 304 illustrations. St. Louis: Mosby, 1970.

This extremely readable book deserves a broader and more intriguing title, for it presents an enormous amount of detailed information from which rational guidelines for therapy are drawn. Best of all, this is achieved without being dry or pedantic. Indeed the book is engrossing, a rare condition for books on this subject. For this 2nd edition the author has added a section on current methods of treating seven major categories of opthalmic problems. The material is well organized, clearly presented, and most of the 39 chapters are generously supported by references. The author's restraint in the use of professional jargon places much of this technical material within the reach of readers approaching this subject for the first time. For this reason, this work is a suitable choice as the first book on this subject to be purchased by an individual or a medical library. Opthalmology residents will find the book exceedingly helpful in the consideration of therapy for difficult cases. All opthalmologists will appreciate the author's achievement of distilling a vast amount of information, both tradtional and modern, into a useful volume for ready reference.

ROBERT W. NEIDLINGER, M.D.

**Medical Pharmacology, Principles and Concepts**, 5th ed. ANDRES GOTH, M.D. Price $16.50. Pp. 665, with 108 illustrations. St. Louis: Mosby Co., 1970.

In the dynamic field of Pharmacology, it is most important that the active clinician have access to an up-to-date, succinct, lucid source of authentic information on the principles and concepts of drug action pertinent to the best in the practice of modern medicine. Goth's *Medical Pharmacology* deserves its title since it certainly meets this need. The essential elements of clinical pharmacology are presented clearly and without excessive verbiage or detail. The test, illustrations, and references have been updated since the 1968 (4th) edition. With emphasis on what the physician needs to know about the mechanisms of actions of drugs, the 5th edition continues to provide appropriate attention to sound therapeutics as understood at this time. A most useful new appendix on drug interactions is a welcome addition. The format is designed to yield fast answers to questions either by drug or by class of action. All in all, this highly useful text appeals as one carefully designed to meet the drug therapy needs of the busy practitioner.

CLIFTON K. HIMMELSBACH, M.D.

**Ophthalmic Optics and Refraction.** SIR STEWART DUKE-ELDER, G.C.V.O., F.R.S. and DAVID ABRAMS, D.M., F.R.C.S. 879 pages, with 992 illustrations and 9 colored plates. St Louis: Mosby, 1970. (London: Henry Kimpton). 1970.

This book is Volume V of the fifteen volume SYSTEM OF OPHTHALMOLOGY, now almost complete, which is edited and partially written by Sir Stewart Duke-Elder; ophthalmology's most prestigious author. This work represents an updating and expansion of his long revered and classic Textbook of Ophthalmology.

For the most part this book is not one which is to be read: rather it is to be studied. Much of the material is technical in nature and must be absorbed over months; in fact, this material is covered by most ophthalmologists in a protracted basic science course before or during residency.

Refracting is the "bread and butter" of most ophthalmologists and each must learn the basic principles of optics as apply to ophthalmic lenses and to the eye. Each must also learn to refract, and this he does by doing it, over a lifetime. No better guidebook is available than this one, or the sections on the subject in the predecessor Textbook.

In speaking of refracting and the prescribing of spectacles or contact lenses Duke-Elder states in the preface of the volume: "indeed, of all aspects of medicine this practice gives to more people more comfort and increased efficiency than any other medical technique." Non-ophthalmologists may question this statement and may, indeed, question whether this is a medical technique. But it is certainly true that prescriptions for glasses are among the most common written by physicians; and most everyone over forty-five, and multitudes younger, will testify that without such prescription he could not function.

This book has a short introduction dealing with the history of ophthalmic optics and the remainder of the volume is divided into five sections: Optics, Anomalies of Refraction and Accommodation, Binocular Factors in Refraction, Eyestrain and Visual Hygiene, and Optical Appliances. The two chapters on geometrical optics and the dioptric imagery of the eye would be hard going unless one has been previously introduced to the subject by a formal course. Things become a little easier by the time the chapter on adjustments to the eye's optical system, i.e. accommodation, is reached and farther on anomalies of the optical system, simple refractive errors, and pathological myopia, the reading is almost like the ordinary medical textbook. The section on myopia contains some excellent color plates on changes in the fundus in myopia. Especially interesting is the section on changes in diabetes mellitus. Another very interesting chapter is on malingering. The chapter on eye-strain would make good reading for any physician faced with the problem of unexplained headache. The part on visual hygiene, which the authors define as the promotion of the correct relationship between the visual task, the environment in which it is performed and the person performing it, also might be appreciated by the non-ophthalmologist. A fault of the chapter, in the opinion of the reviewer, is that it is not pointed out that such factors as the intensity and distribution of illumination, positioning of material to be viewed, size of print or objects, duration of the visual task, etc., all have to do with the comfort and quality of vision and have nothing to do with the health of the eye. There is meat for every practicing or in-training ophthalmologist in the chapter on spectacles, not the least of which is the history; in this Benjamin Franklin is given full credit for the introduction of bifocal lenses in 1775.

There will be few ophthalmologists in the English speaking world who sooner or later will not have this excellent volume, along with the others in the series, on his library shelf.

HARRY M. MCALLISTER, M. D.

**Hernia Repair Without Disability.** IRVING L. LICHTENSTEIN, M.D. Price $26.50, Pp. 210 with 113 illustrations. St. Louis: Mosby, 1970.

This book is a well written exposition of the author's views on common abdominal hernias. It covers the field well, considering the history of hernias and their treatment, incidence and economic significance as well as anatomy and techniques. Especially impressive is the authors approach using local anesthetic and quick postoperative mobilization of patients. Patients usually walk from the operating room and virtually all go home within a day of operation.

The author's views are presented dogmatically. As is almost inevitable in dealing with a subject so common as the hernia, these views are certain to meet with some disagreement, though it is likely the areas of disagreement will vary from one group of surgeons to another. There are a good many minor points to which one might take exeption but certainly there are many surgeons who will be concerned with at least three. First, the author has little regard for the transversalis fascia as an important component of inguinal hernia repair. Second, the author has no use for the Coopers ligament repair of McVay and thirdly, he insists that a plastic mesh be included in all direct or recurrent inguinal hernia repairs. This enthusiasm for foreign materials is carried over to their use in the repair of ventral hernias. Since the author's recurrence rate in a carefully followed and reasonably large series of patients is an enviable 2.4%, one can not lightly dismiss his views.

The illustrations are quite good and the text easy to read. This reviewer confesses a certain prejudice for books such as this which are well spiced with aphorisms and quotations. These made the book enjoyable if for no other reason. If one considers the reservations one may have for the views expressed in the book it can be recommended to any house officer or surgeon for a pleasant evening's reading. At its price ($26.50) however, most will likely borrow it from the Hospital or Medical School Library.

JOHN S. DILLON, M.D.

**Cancer, Diagnosis, Treatment, and Prognosis, 4th Edition.** LAUREN V. ACKERMAN, M.D. and JUAN A. DEL REGATO, M.D. Price $39.50. Pp. 1050, with illustrations. St. Louis: Mosby, 1970.

The generic term "cancer" comprises a large number and variety of malignant neoplasms. The interrelationship of these neoplasms, the causative factors and their deleterious effects on the organism in which they arise, have been the concern of the medical profession for a number of years. Doctors Ackerman and del Regato are to be congratulated for successfully compiling this volume from the vast amount of clinical literature that has been increasingly accumulating in the journals of the world. These authors have published a text that brings general information to the student and to the general practitioner, and yet supplies the specialist involved in the diagnosis and treatment of malignant tumors with a valuable source of reference material. The publication presents an intergraded view of the aspects of diagnosis, treatment, differential diagnosis, clinical evolution, histopathology and epidemiology of malignant disease. The content is current and many older references have been deleted and newer references added to bring the reference source material up to date. Chapters 1 through 5 are devoted to subjects of general interest. Chapters 6 through 18 are organized according to systems or organs. Chapters 19 through 20 are devoted to two important neoplasms, Hodgkins Disease and Leukemia, which merit special consideration because of the striking advances in the clinical treatment and epidemiology have been achieved in the past 5 to 10 years. Clinical evolution, treatment, and prognosis have been increasingly emphasized.

The 4th edition is presented in a new two-column format to conserve space and to prevent the necessity for publishing it in two volumes. There are 124 tables, four color plates, and 783 text figures, including clinical photographs, photomicrographs and drawings.

The increasing number of patients who will be afflicted with cancer and who will depend upon the knowledge and skill of their physicians in the management of this disease, require that careful consideration be given to this serious clinical problem. In spite of the fact that the majority of forms of cancer are not curable, the physician's success in managing his patient's disease depend upon his intelligent understanding, knowledgeable treatment, and optimistic empathy toward his patient. This book will assist the physician in developing such an approach to the clinical problems of malignant diseases.

BRUCE I. SHNIDER, M.D., F.A.C.P.

**Complete professional liability (Malpractice)* and Personal Insurance for the Doctor.**

Employees Workmen's Compensation
Bonds on Employees
Equipment Floater
Fire Insurance Contents
Business Expense Disability
Non-Cancellable Disability Income
Auto and Home Insurance

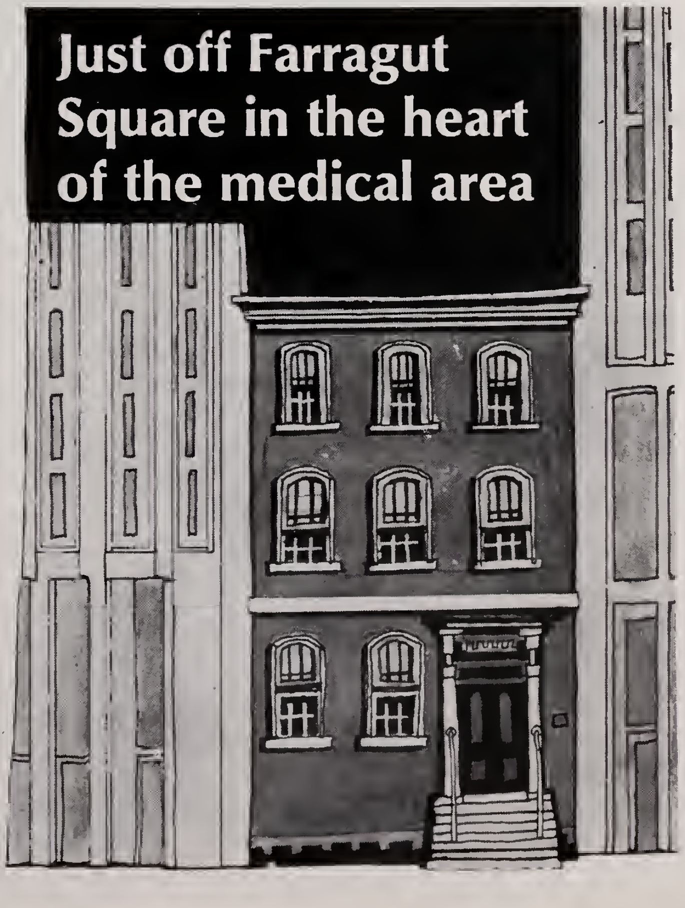
*As endorsed by the Medical Society of the District of Columbia.

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

822 Connecticut Avenue, N.W.
Washington, D.C. 20006
Telephone: 638-5322


Just off Farragut Square in the heart of the medical area

Surgical Supplies and Equipment

*Complete Fitting Service for Ladies and Men*

KLOMAN SURGICAL SUPPLY CO.
1028 19th Street, N.W.
Washington, D. C. 20036

*Telephone:* 223-3444

# DOCPAC BRIEFS

## A Voice in Congress

Political action in the District of Columbia has finally become a reality! With the recent election of a delegate to Congress from the District, not only did the District obtain direct voice in the House of Representatives but the inhabitants of the District were privileged to exercise their franchise for national representation for the first time in approximately 100 years. The organization candidates for both major parties were interviewed prior to the election by the Candidate Evaluation Committee of DOCPAC. These lengthy interviews were both interesting and instructive to all parties involved, including the candidates. As a result of these interviews and other more tangible support, organized medicine now has a healthy working relationship with Reverend Walter Fauntroy, who won the election by a wide margin.

Battle lines are now being drawn on Capitol Hill for some form of comprehensive health legislation in the current session of Congress. There is no longer a question as to *whether*, but only as to *what kind*. If the voice of medicine is to be heard, and if those candidates whose views on health legislation and medical matters deserve our support are to be elected, we need participation by every physician in the District of Columbia as an active member of DOCPAC. There is no other investment you can make that has an equal chance of directly influencing the type of medicine that will be practiced in this country in the years to come.

KARL C. JONAS, M.D.
*Chairman, D.C. Political Action Committee*

# NATIONAL & REGIONAL MEETINGS

June 20–24: American Medical Association. Atlantic City, Address: Dr. Ernest B. Howard, Exec. Vice President, 535 North Dearborn St., Chicago, Illinois 60610.

June 21–23: American College of Preventive Medicine (Interim Meeting). Atlantic City. Address: Mr. Ward Bentley, Exec. Dir., 801 Old Lancaster Rd., Bryn Mawr, Pennsylvania 19010.

June 22–23: American Diabetics Association. San Francisco. Address: Mr. J. Richard Connelly, Exec. Dir., 18 E. 48th St., New York City, New York 10017.

June 28–July 2: International College of Surgeons, U. S. Section, Annual Mid-Summer Meeting (Clinical Surgical Forum) Cosponsored by New England States Region, New York State Surgical Section and Eastern Canadian Region. Bretton Woods, New Hampshire. Address: Dr. Salvadore R. Traina, Chairman, 155 High St., Medford, Massachusetts 02155.

August 15–18: International Symposium on Drug Tolerance, Addiction, Abuse and Methadone Treatment, Sponsored by Xavier University of Louisiana, College of Pharmacy. New Orleans. Address: Dr. Jasbir M. Singh, Director of Symposium, Xavier University of Louisiana, 7325 Palmetto St., New Orleans, Louisiana 70125.

August 22–26: American Society for Pharmacology and Experimental Therapeutics. Burlington, Vermont. Address: Dr. Ellsworth B. Cook, Exec. Officer, 9650 Rockville Pike, Bethesda, Maryland 20014.

**September 7–12: International Congress of Pharmaceutical Sciences, 31st, Sponsored by International Pharmaceutical Federation, Sheraton Park Hotel, Washington, D.C. Address: Mr. George B. Griffenhagen, Sec., c/o American Pharmaceutical Association, 2155 Constitution Ave., N.W., Washington, D.C. 20037.**

September 9–11: American Association of Obstetricians and Gynecologists. Homestead Hotel, Hot Springs, Virginia. Address: Dr. Charles A. Hunter, Jr., Sec., Indiana University Medical Center, 1100 W. Michigan St., Indianapolis, Indiana 46202.

September 20–24: American Academy of Opthalmology and Otolaryngology. Las Vegas. Address: Dr. C. M. Kos, Exec. Sec.-Treas., 15 Second St., S.W., Rochester, Minnesota 55901.

# GENERAL NEWS

**Dr. Robert C. Hunt (right) of Falls Church, Virginia, was named Pediatrician of the Year recently at a dinner closing the annual Postgraduate Symposium sponsored by the Department of Pediatrics of Georgetown University Medical Center. The award was presented by Dr. Philip L. Calcagno, chairman of Georgetown University's Department of Pediatrics. Dr. Hunt is clinical associate professor of pediatrics at Georgetown and is in private practice in Falls Church. Also he has served as president of the Northern Virginia Pediatric Society.**

The Model Neighborhood Action Board of Prince George's County, **Maryland** has opened a **Family Planning Clinic.**

The Clinic, located at 6773 George Palmer Highway in Seat Pleasant, is the first of several such clinics planned for the county's model cities area under a $340,000 grant from the Maryland State Health Department.

Because of a shortage of basic information on the effects of oral contraceptives, the **Center for Population Research** of the National Institutes of Health, National Institute of Child Health and Human Development plans to more than double its expenditures for research in evaluation of **contraceptive methods.**

Funds for methods evaluation research rose from $1.6 million for 1970 to $3.5 million for 1971.

Several of the nations mass-circulation magazines, including Look, the Ladies Home Journal and Redbook are ending a self-imposed ban and will begin carrying advertisements for **male contraceptives.**

The **American Cancer Society** has endorsed the bill introduced by Senator Edward Kennedy (D., Mass.) to establish an independent national cancer agency charged with conquering cancer.

Governor of Maryland, Marvin Mandel, has designated **Philip A. Green** as **Director of the Drug Abuse Administration** of the **Maryland** State Department of Health and Mental Hygiene.

The **Student American Medical Association** has received a grant in the amount of $15,000 from E. R. Squibb & Sons for the purpose of funding a new

*(Continued on page 415)*

# Dear Sir:

# Even the fastest typist in your office will slow down your letters if she doesn't use the ZIP CODES

| List below the addresses (no names necessary) of the people whose Zip Codes you need: | Post Office will fill in Zip Codes here |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Your Name ________________________

Your Address ________________________

City ________________________

State ____________________ Zip ________

Place in stamped envelope and mail to: Local Post Office.
No return envelope necessary.

Money for shorthand.

Money for electric typewriters.

Money for an efficient mail room.

None of it makes much sense if your letter is going to spend unnecessary hours at the Post Office.

And that's what may happen if your secretary doesn't have the Zip Codes she needs.

Which is why we printed the coupon at left.

Tell your girl to fill it out and mail it in. We'll supply the Zip Codes she's missing. Free.

Then, when you rush off a letter and she rushes it out, we can keep right on rushing it.

All the way to its destination.

*Mail moves the country – ZIP CODE moves the mail!*

advertising contributed
for the public good

(*Continued from page 413*)

program of summer externships. These externships will be dealing with the serious problems resulting from the "**inner city**" and "**ghetto sections**" of the nation's urban areas.

**Dr. Hugh R. Butt** of Rochester, Minnesota, was installed as President of the 17,000 member **American College of Physicians** at the 52nd Annual Session of the College held in Denver, Colorado, March 29 - April 2. Dr. Butt is Professor of Medicine at the Mayo Graduate School of Medicine. Dr. William A. Sodeman of Philadelphia was chosen President-Elect for 1971.

**Dr. John P. Adams**, Professor and Chairman of the Department of Orthopaedic Surgery at the George Washington University School of Medicine, was elected **President of the American Society for Surgery of the Hand** at the organization's Annual Meeting held in San Francisco in March.

Editor of four volumes of *Current Practice in Orthopaedic Surgery*, Dr. Adams has written or co-authored over 40 publications and presentations.

**Dr. Charles R. A. Gilbert**, a District of Columbia Obstetrician-Gynecologist, has been elected **President of the American Society of Abdominal Surgeons** for 1971.

The 1971 *Congressional Directory* of the *92nd Congress* may be obtained from the District of Columbia AMA field office.

**Dr. Stephen W. Kuffler** received the $7,500 **Passano Award for 1971**, one of American medicine's highest honors. The Harvard Medical School Professor is world-famed for his analyses of the transmission of information from one cell to another, how it is analyzed in the nervous system, and how muscle movement is controlled and executed.

Dr. Kuffler is Chairman of the Department of Neurobiology. This department was created especially for him and his collaborators—Harvard's ultimate accolade. He is also Robert Winthrop Professor of Neurobiology.

The Passano Award is sustained by annual contributions from the Williams & Wilkins Company, publishers, and the Waverly Press, printers of books and periodicals in medicine and its allied sciences. The Passano Foundation was formed by the late Edward Boteler Passano, founder of the two companies. Of the 31 Passano laureates sharing in the award since 1945, six have subsequently received the Nobel Prize.

At the Annual Meeting of the D. C. Division of the American Cancer Society on May 3, **Dr. Cyril A. Schulman** was recepient of the **St. George Medal and Citation** for his contributions to cancer control. Dr. Schulman is Clinical Associate Professor of Medicine at the George Washington University School of Medicine.

The D. C. Chapter, **American Association of Medical Assistants**, Inc., installed the following officers for 1971-72 during their Ninth Annual Symposium at the Watergate Terrace on May 1: *President*, Dorma V. Schnurr; *President-elect*, Evelyn E. Reed; *Vice President*, Mary M. Weimer; *Secretary*, Leatha M. Proctor; *Treasurer*, Phyllis W. Johnson; *Advisory Committee*, Dr. William S. Lyons, Dr. Harold M. Silver, Dr. Charles W. Thompson, and F. P. Ferraraccio, Executive Director, Medical Society of D. C. (Continuing Advisor).

Chartered in 1962, the D. C. Chapter is an affiliate of AAMA, Inc., with headquarters in Chicago and over 11,000 members nationally. Locally, meetings are held each month (except July and August) on alternate first Wednesdays and Thursdays at 7:30 p.m. in the D. C. Medical Society Building with guest speakers from medical and allied fields. Membership is open to all medical assistants in the metropolitan area. For information contact Mary M. Weimer, Membership Chairman, at 223-5810.

The **Thoracic Society of the District of Columbia** has elected the following officers for 1971-72: *President*, Dr. P. Gregg Rhodes; *President-Elect*, Dr. Bernard Grand; *Vice President*, Dr. Edward S. Melman; and *Secretary-Treasurer*, Dr. Robert L. Hackney.

Research
Education
Service
American
Cancer
Society
5702.01 (MAT)
5702 (ELECTRO)

bp
KONSYL
REG. U.S. PAT. OFF.
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
PLANTAGO OVATA COATING
MADE BY
BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 12 OZ.
bp
L.A. FORMULA
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
NET WEIGHT 14 OZ.

Sugar-free medication for the obese patient.

For the patient who requires maximum palatability.

the safe,
effective ways to promote
normal peristalsis

*in the treatment of constipation or diarrhea*

**Burton, Parsons & Co., Inc.** *Manufacturers of Ethical Pharmaceuticals Since 1885*
▪ WASHINGTON, DC. 20027 ▪ MONTREAL, CANADA ▪ MUNICH, GERMANY

# OBITUARIES

## Laurence H. Kyle, M.D.
## (1916-1971)

Dr. Laurence Harwood Kyle, Chairman of the Department of Medicine at the Georgetown University School of Medicine, died April 24, 1971. His home address was Box 355A Vale Road, Route 1, Oakton, Virginia.

Born in Huntington, Massachusetts on April 16, 1916, he received his bachelor of science degree from the University of Massachusetts in 1937 and his medical degree from Boston University in 1941. He interned at Nassau County Public General Hospital in Hempsted, New York in 1941-42. Following service in the United States Army during World War II, in 1946-47 he was a resident at Boston City Hospital in in Boston. In 1947-48 he did post graduate work as a National Institutes of Health Senior Research Fellow in Endocrinology and from 1948-1950 he was a William Wade Hinshow Research Fellow at Georgetown University Hospital.

Dr. Kyle joined the Georgetown University School of Medicine staff in 1948 as an instructor in medicine. He served as chief of the Endocrine Clinics and Director of the Metabolic and Renal Research Laboratories at Georgetown University Hospital from 1950-58. In July of 1958, he became Professor of Medicine and Director of the Department of Medicine at Georgetown University Medical Center.

In 1957, Georgetown University presented Dr. Kyle with the Raskot Award for excellence in teaching and research.

The author of more than 50 scientific articles, Dr. Kyle served as a consultant for various government facilities in the Washington area.

Prior to his death, Dr. Kyle, known internationally for his research on metabolic diseases, particularly obesity and bone disease, was on a teaching visit to Gorgas General Hospital in Balboa, Canal Zone.

He is survived by his wife, the former Margaret Ann Stringer and three children, Patricia, Margaret and Laurence, Jr., all of the home address, and his mother and a sister.

## Cornelius J. Burns, M.D.
## (1919–1971)

Dr. Cornelius J. Burns, chief pathologist at Prince Georges County Hospital, died April 1, 1971. He lived at 5604 Inwood Street, Cheverly, Maryland.

A native of Danbury, Connecticut, he graduated from Mount St. Mary's College, Emmitsburg, Maryland in 1941. He received his medical degree from Georgetown Medical School in 1944. He interned at Providence Hospital, Washington, D.C. from 1944-1945 and was a resident at Georgetown University Medical Center from 1947-1950.

He served as a Captain in the U.S. Army during World War II.

Dr. Burns had been an Instructor in Pathology at Georgetown University Medical Center since 1950. He was a member of the American Society of Clinical Pathologists and the American College of Pathologists.

He is survived by his wife, Anna T., a daughter Cornelia, two sons, Michael and Stephen; two brothers, William and Louis and a sister, Mrs. Martin Smith, all of Danbury, Connecticut.

## A. Leonard Smith, M.D.
## (1908-1971)

Dr. Andrew Leonard Smith, a Washington area specialist in anesthesia, died March 6, 1971. He lived at 8908 Fairview Road, Silver Spring, Maryland.

Born in Driftwood, Pennsylvania on February 16, 1908, he received his bachelor of arts from George Washington University in 1941 and his medical degree from George Washington University Medical School in 1941. He interned at Garfield Memorial Hospital in Washington, D.C. from July 1941 until July 1942.

He served in the United States Army from July 1942 until December 1945.

He is survived by his wife.

## Robert B. Hightower, M.D.
## (1907-1971)

Dr. Robert Beall Hightower, an Alexandria pediatrician for over 24 years before retiring in 1965, died April 18, 1971. He lived in Green Cove Springs, Florida.

A native of Oxford, Mississippi, he received his bachelor of science degree from the Mississippi State College in 1927 and his medical degree from the University of Virginia in 1932. He did postgraduate work at Harvard University in Child Hygiene. He interned at the University Hospital of the University of Virginia, Babies Hospital in New York and Children's Hospital in Boston. He was a resident at the University of Virginia in 1933-34.

Dr. Hightower was an instructor at Harvard University Medical School from March, 1936 to December, 1937. He served as Pediatric Clinician for the State of Virginia from 1937-1939. He had been a director of the Crippled Children's Clinic here and also a director of the District school system's medical program. At one time he was head of Virginia's postgraduate pediatrics study program.

He is survived by his wife, the former Rossell MacDonald.

## Myles H. Clark, M.D.
## (1931-1971)

Dr. Myles Howard Clark, a Southeast Washington pediatrician, died April 24, 1971. He lived at 707 Alabama Avenue, S.E.

Born in Jackson, Mississippi on November 10, 1931, he received his bachelor of science from Howard University in 1961 and his medical degree from the Howard University College of Medicine in 1965. He interned at Jefferson Medical College Hospital, Philadelphia, Pennsylvania where he also was a resident from 1966-68.

He served in the United States Army from 1954-1956 during the Korean War and in the United States Army Reserves from 1956-62.

He is survived by his wife, Screcia Clark and two children of the home address.

## Charles David Cooper, M.D.
## (1927–1971)

Dr. Charles David Cooper, a specialist in internal medicine, died April 8, 1971. He lived at 3501 Faylor Place in Alexandria, Virginia.

Born in Atlantic City, New Jersey, he graduated from Calvin Coolidge High School in Washington, D.C. During World War II, he worked for the Office of Strategic Services. He received his degree from George Washington University in 1948 and graduated from the George Washington University School of Medicine in 1951. He interned at George Washington University Hospital where he was also a resident. He did postgraduate work on a fellowship at Duke University in Durham, North Carolina.

Dr. Cooper had been practicing in Alexandria since 1960. He was a fellow of the American College of Physicians and an assistant clinical professor of medicine at George Washington University.

He is survived by his wife, the former Shirley B. Clayman, three daughters, Juli, Vicki, and Lori and a son, Steven, all of the home address; his mother, Lillian Cooper of Washington; and a brother, Dr. Irving S. Cooper of New York.

**NURSES REGISTRY**
LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**

***KALORAMA CONVALESCENT HOME, INC.***

of Licenses and
Licensed by the
D. C. Department
Inspections

INSTITUTIONAL CARE
for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

*Classified advertisements of a professional nature are free to members.*

## REAL ESTATE

FOR SALE: Residence/office with prestigous location on River Road in Bethesda area. Huge office, large home on ¾ acre. Landscaped with many varieties of azaleas and over 50 dogwoods. Call (301) 229-6360.

VACATION RENTAL: Henlopen Avenue, Rehoboth Beach. 4 bedrooms, 2 baths, never rented before. Air conditioned, all electric, all appliances, all conveniences for family. Contact Dr. D. Starr, (202) 232-2696.

## OFFICE SPACE AVAILABLE

FOR RENT: Office for 2 doctors, 5323 Connecticut Avenue, N.W. 3 examining rooms, 1 lab., 1 x-ray, and 1 waiting room. Contact Resident-manager, Mr. Adams, (202) 362-7847.

FOR RENT: 1726 Eye Street, N.W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298-6936.

## PHYSICIAN WANTED

HOUSE OFFICERS WANTED: Medicine and Ob/Gyn. 350 bed community hospital in suburban D.C. E.C.F.M.G. and Permanent or Immigrant Visa required. Inquire: Medical Staff Office, Holy Cross Hospital of Silver Spring, 1500 Forest Glen Road, Silver Spring, Maryland 20910.

WANTED M.D.: Either G.P. or specialist to share office with dentist. Common waiting room, 3 private treatment rooms, and a private office. Carpeted, paneled, and air-conditioned. Private parking. Located in Adelphi, Maryland area. Call (301) 422-8900.

## EQUIPMENT FOR SALE

FOR SALE: Office equipment for sale due to doctor retiring. If interested call (202) 347-2429. There is a Bausch & Lomb Microscope in the collection, Examining Table and many other articles used in practice.

Your Heart Fund Fights

HEART ATTACK

STROKE

HIGH BLOOD PRESSURE

INBORN HEART DEFECTS

®

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

- desirable associates
- office space
- ancillary services
- may be obtained thru

A CLASSIFIED ADVERTISEMENT

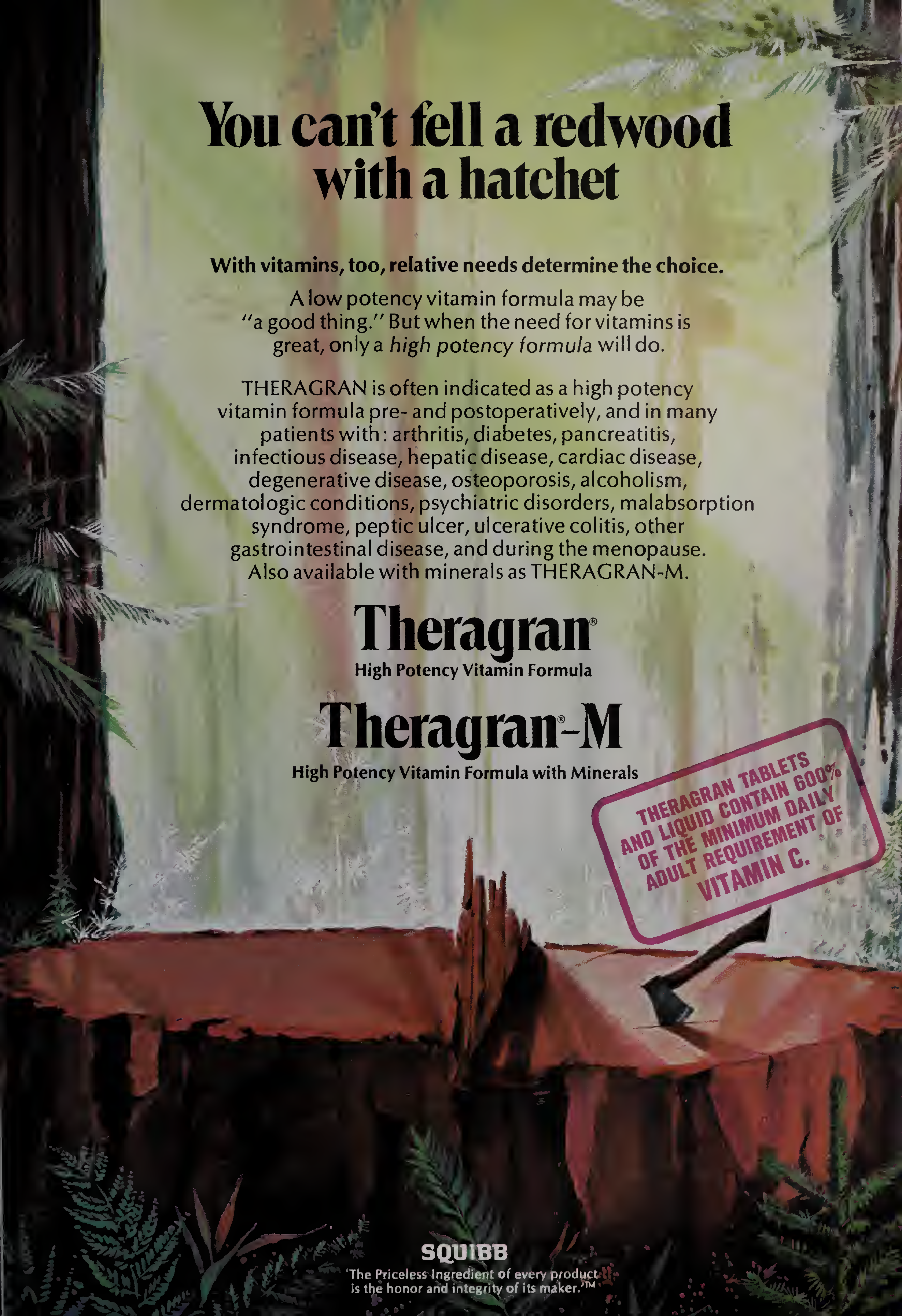
- in the MEDICAL ANNALS

# INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

| | Page |
|---|---|
| **Automated Medical Service** | |
| Health Auto-Data, Inc. | 2 |
| **Business Counseling** | |
| Data Medics | T-408 |
| **Diatetic Products** | |
| Campbell Soup Company | T-385 |
| **Insurance** | |
| McDermott Insurance, Inc. | T-411 |
| Mutual of Omaha | 3-C |
| **Equipment and Supplies** | |
| Kloman Surgical Supply Company | T-412 |
| **Investment Planning** | |
| Russell, Marsh & Kennedy | T-408 |
| Suter Associates Retirement Planning Company | T-398 |
| **Nurse Registries** | |
| Association of Undergraduate and Practical Nurse Registry | T-418 |
| Capital Nurse Registry | T-404 |
| District of Columbia Manpower Administration | 9 |
| **Pharmaceuticals** | |
| Arch Laboratories | T-403 |
| Burroughs-Wellcome | 14 |
| Burton-Parsons | T-416 |
| C. B. Fleet Company, Inc. | T-399 |
| Dow Chemical Company | 12–13 |
| Geigy Pharmaceuticals | 4 |
| Eli Lilly & Company | 8 |
| Riker Laboratories | 7 |
| Roche Laboratories | 2-C-1, T-400-401, 4-C |
| G. D. Searle | T-386-387 |
| Smith, Kline & French | T-402 |
| E. R. Squibb & Sons | 11 |
| The Upjohn Company | 14 |
| USV Pharmaceuticals | T-390-391 |
| **Pharmacies** | |
| Maxwell & Tennyson | T-408 |
| Peoples Drug Stores | 6 |
| **Sanitariums** | |
| Kalorama Convalescent Home | T-418 |

T-text



# You can't fell a redwood with a hatchet

**With vitamins, too, relative needs determine the choice.**

A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a *high potency formula* will do.

THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.

**Theragran®**

**High Potency Vitamin Formula**

**Theragran®-M**

**High Potency Vitamin Formula with Minerals**

THERAGRAN TABLETS AND LIQUID CONTAIN 600% OF THE MINIMUM DAILY ADULT REQUIREMENT OF VITAMIN C.

**SQUIBB**

'The Priceless Ingredient of every product is the honor and integrity of its maker.'™

# The get-up-and-go summer cold and allergy pill.

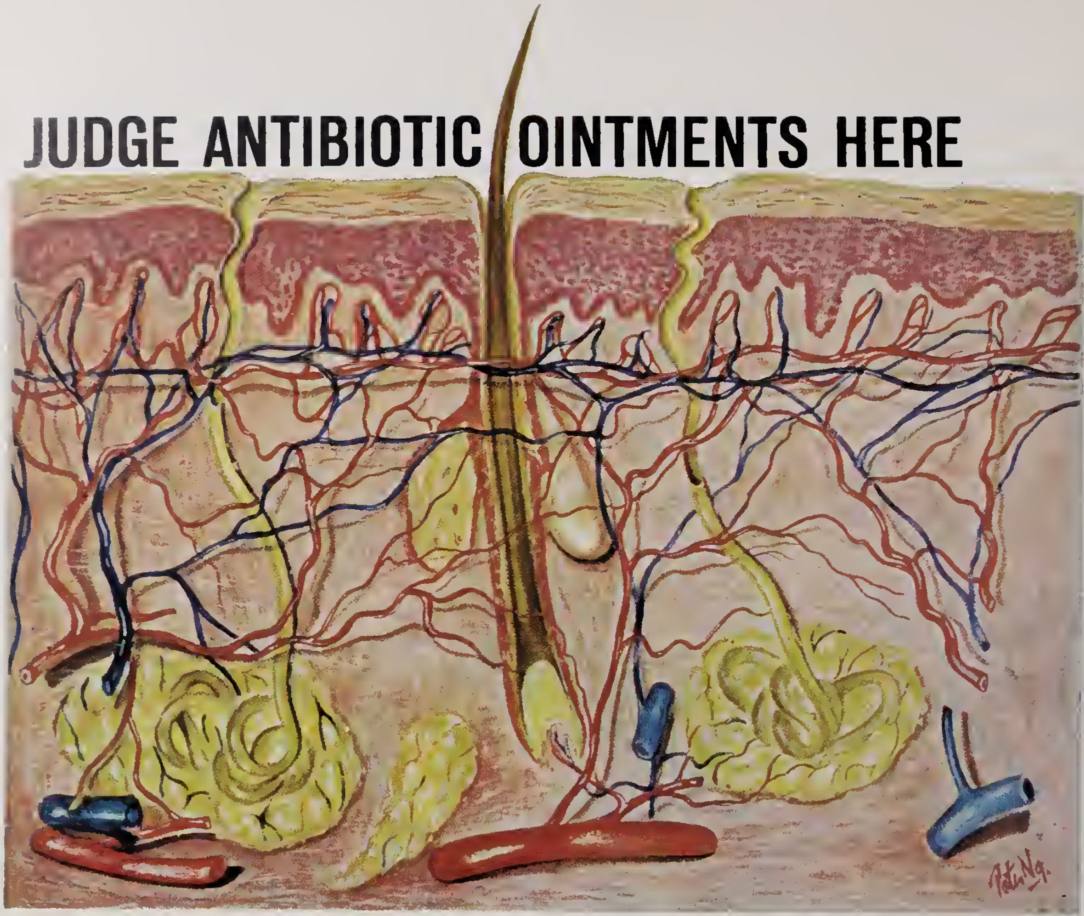
Novahistine LP can help your patients get out and enjoy themselves in spite of allergic rhinitis, hay fever or summer colds. And even when nasal congestion is caused by repeated allergic episodes, Novahistine LP can usually give prompt and long-lasting relief. These continuous-release tablets contain a vasoconstrictor-antihistamine formulation that goes to work rapidly and lasts for hours. And convenient, twice-a-day dosage lets most patients enjoy relief all day and all night. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

**Novahistine® LP** decongestant

DOW THE DOW CHEMICAL COMPANY, Rx Pharmaceuticals, Indianapolis

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

# JUDGE ANTIBIOTIC OINTMENTS HERE



## Results on skin are final proof of any topical antibiotic's effectiveness

**No in vitro test can duplicate a clinical situation on living skin.** 'Neosporin' (polymyxin B —bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

**Caution:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

**Contraindications:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

**Supplied:** Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

# 'NEOSPORIN'®

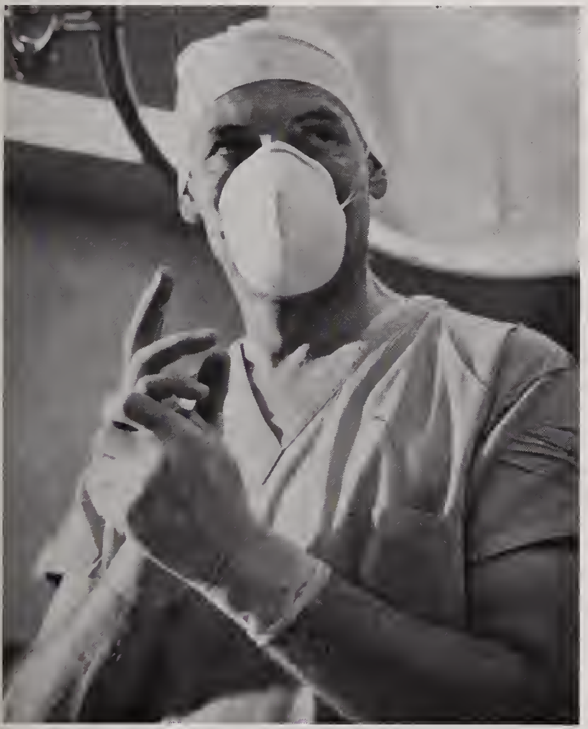
brand

## POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

**BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.**

# Make Sure You Have Cash To Live On When You're Disabled!

Even doctors get sick and hurt! When your turn comes and you can't continue your practice, will you still be able to provide for yourself and your family—pay for food, clothing, your home, the everyday living expenses, plus extra medical bills?



You can have this financial security with the Disability Income Protection Plan available to members of the Medical Society of the District of Columbia.

PAYS UP TO $225.00 A WEEK
when you're sick or hurt
and can't practice!

*Check these other important features of this plan:*

- Benefits are TAX-FREE, for you to use as you see fit.
- Confinement is never required during disability.
- Benefits are payable regardless of other coverage.
- There is no automatic age termination.
- Your policy is guaranteed renewable while the program remains in force regardless of benefits paid to you or any future changes in health.
- Premiums are low, due to the mass purchasing power of your Society.
- There are few exceptions. Your policy does not cover: suicide or attempted suicide; loss during a declared or undeclared war or while a member of an armed service; loss due to noncommercial flying; costs of childbirth, pregnancy or any complication.

Fill out the coupon below and mail it today! You'll receive complete information on this outstanding Disability Income Protection Plan available to you as a member of the Medical Society of the District of Columbia. Don't delay!

JOSEPH E. JONES, Administrator
1666 Connecticut Avenue, N.W.
Washington, D.C. 20009 Phone: (202) 483-3100

Please rush to me complete information on the Disability Income Protection Plan available to me as a member of the Medical Society of the District of Columbia!

Name____________________

Address____________________

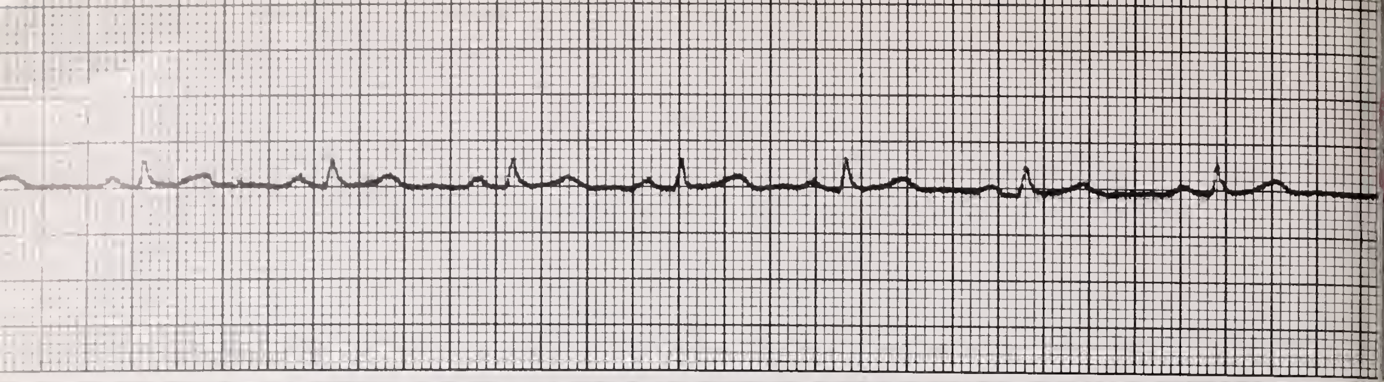
City__________ State________ ZIP Code_____

Underwritten by

**Mutual of Omaha**®
*The Company that pays*

Life Insurance Affiliate: United of Omaha

MUTUAL OF OMAHA INSURANCE COMPANY
HOME OFFICE: OMAHA, NEBRASKA



# When disease is ruled out and psychic tension is implicated

# Valium® (diazepam)

## 2-mg, 5-mg, 10-mg tablets

# helps relax the patient and relieve his somatic symptoms

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose T.M. packages of 1000.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

DISPLAY

*Volume 40 · Number 7 · July 1971*

# MEDICAL ANNALS
of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

**Recent Observations on Transfusion Reactions**
William V. Miller, M.D. and Paul J. Schmidt, M.D.

**Transfusion in Washington 100 Years Ago**
Paul J. Schmidt, M.D.

**Opportunities for Progress Against Cancer**
Carl G. Baker, M.D.

**Genetic Counseling**
Roscoe O. Brady, M.D.

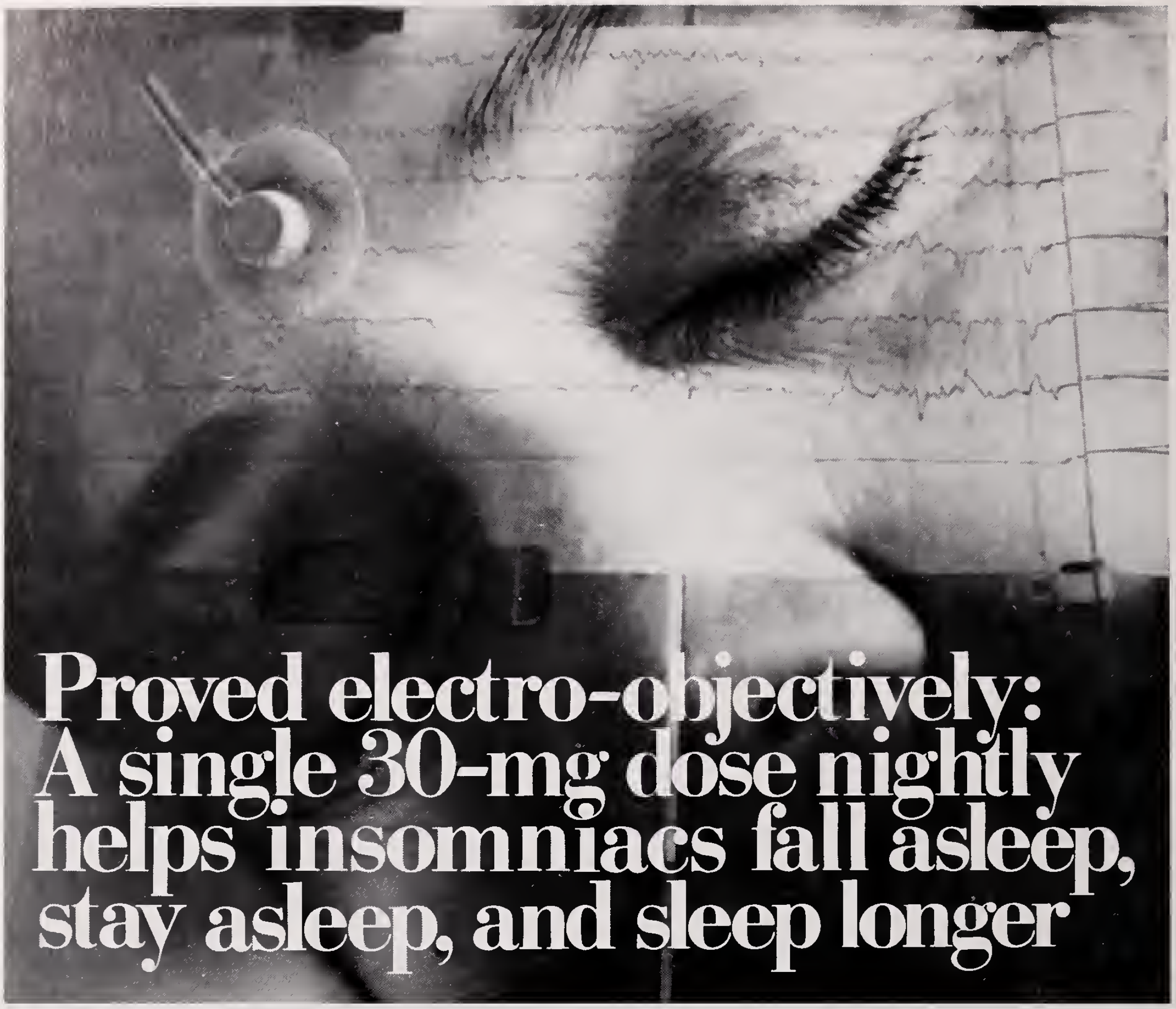
**Emergency Treatment of Drug Abusers**
Richard Phillipson, M.D.

**Outlook for Prevention of Dental Caries**
Henry W. Scherp, Ph.D.

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
25 AUG 1971

**Main reading room of the National Library of Medicine.**

*Annual Scientific Assembly*
THE STATLER HILTON HOTEL
September 23 & 24, 1971



# Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

**Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]**

**Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.**

## Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

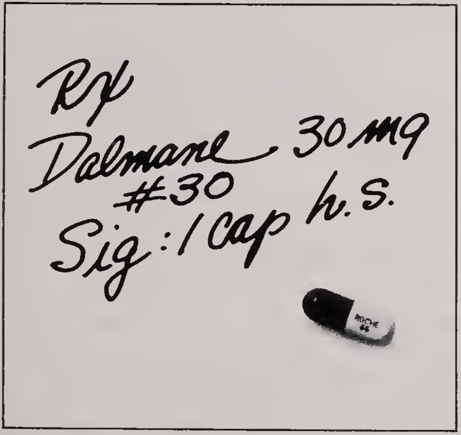
THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
25 AUG 1971

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

## Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.[3] Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

**References: 1.** Kales, A., *et al.*: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. **2.** Kales, A., *et al.*: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed.): *Sleep: Physiology and Pathology*, Phila., Lippincott, 1969, p. 331. **3.** Data on file, Medical Department, Hoffmann-La Roche Inc.



For the sleep your patients need

New **Dalmane**®
(flurazepam hydrochloride)

**Before prescribing, please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

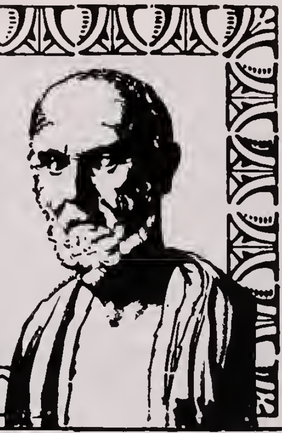
**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc
Nutley, New Jersey 07110

"Healing is a matter of time, but sometimes also of opportunity."

Hippocrates, *Precepts*, Chapt. I



**and so is money-management**

After an initial exploratory examination of your finances by The National Bank of Washington, we can prescribe a course of action that will ensure your fiscal health through good times and bad.

Do you want to prepare for your family's security? There are all kinds of trusts and investments that can be established to suit your particular wants and needs.

Do you want to start a college trust fund to provide for your children's education at a time in your life when you might want to slow down? Our Trust Department knows just how to help you to do this.

How much should you invest in stocks and bonds? Our Investment Department won't give you a rule-of-thumb, but it will give you a plan as individual as you are.

Is the chore of day-to-day banking taking too much of your time or the time of your professional staff? Our bank provides you with prepaid, self-addressed envelopes that allow you to handle your checking or savings accounts right at your desk—at no cost to you.

Are you tired of paying monthly service charges on your checking account? At The National Bank of Washington, if you maintain a minimum balance of $300 in your regular personal checking account, there are no service charges.

Do you want to buy some special professional equipment, attend an international medical meeting overseas, buy another car or boat? At The National Bank of Washington you can get a consumer loan for a mere 8% annual percentage rate.

For *any* questions on money management, consult The National Bank of Washington. Twenty convenient locations. Main office: 14th and G Streets, N.W. 624-3000. Member FDIC.

The National
**BANK OF**
**WASHINGTON**

VOLUME 40 • JULY 1971

EDITOR
Wallace M. Yater, M.D.

ASSISTANT EDITOR
Judith E. Perruso

MANAGING EDITOR
Francisco P. Ferraraccio

EDITORIAL BOARD
Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

CONSULTING EDITORS
Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

OFFICERS
Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

EXECUTIVE BOARD
Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Frank S. Pellegrini, M.D. (1974)

DELEGATES TO AMA
John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

LEGAL COUNSEL
John Lewis Smith, III

---

* Ex officio member of the Executive Board

MEDICAL
ANNALS
of the
DISTRICT OF
COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

You know diuretics medically.

Short-acting diuretics may create abrupt, inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

**Hygroton® chlorthalidone USP**

Makes water, not waves.

But have you met them socially?
LADIES

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764

# MEDICAL ANNALS
## of the District of Columbia

## *Contents for July*

### NATIONAL INSTITUTES OF HEALTH NUMBER

### SCIENTIFIC ARTICLES

Recent Observations on Transfusion Reactions. *William V. Miller, M.D.*, Lexington, Ky. and *Paul J. Schmidt, M.D.*, Bethesda, Maryland 419
Transfusion in Washington 100 Years Ago. *Paul J. Schmidt, M.D.*, Bethesda, Maryland 424
Opportunities for Progress Against Cancer. *Carl G. Baker, M.D.*, Bethesda, Maryland 425
Genetic Counseling. *Roscoe O. Brady, M.D.*, Bethesda, Maryland 430
Emergency Treatment of Drug Abusers. *Richard Phillipson, M.D.*, Chevy Chase, Maryland 436
The Outlook for Prevention of Dental Caries. *Henry W. Scherp, Ph.D.*, Bethesda, Maryland 439

### EDITORIALS

Evolution in the Library 461
The Armed Forces Institute of Pathology Moves Forward 463

### SPECIAL SECTION

History of the Medical Society of the District of Columbia. Chapters XIII and XIV. *Theodore Wiprud* 455

### MISCELLANY

President's Page: "May Day 1971" 444
Clinical Center Studies 464
D.C. Mental Health Administration 465
D.C. Health Notes 474
Summary of Executive Board Actions 476
New Members 478
National & Regional Meetings 479
General News 480
Meetings 485
DOCPAC Briefs 486
Books Received 486
Obituaries 487
*Medical Annals Staff and Officers of the Medical Society* *Adv. 3*
*Classified Advertisements* *Adv. 488*
*Index of Advertisers* *Adv. 8*

---

COPYRIGHT ©, 1971 BY THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

Now
available for your
prescribing
needs

Cordran® Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206
000121
Lilly

MEDICAL ANNALS
of the District of Columbia

*July 1971*
VOLUME 40 • NUMBER 7

**National Institutes of Health Number**

This is the second in a seventh series of special numbers of the MEDICAL ANNALS, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the NATIONAL INSTITUTES OF HEALTH NUMBER the Editorial Board is indebted to Dr. Leonard Laster, Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, who secured the papers which appear in this issue.

# Recent Observations on Transfusion Reactions

WILLIAM V. MILLER, M.D.* AND PAUL J. SCHMIDT, M.D.†

DESPITE GREAT ADVANCES in blood-bank serology during the past 25 years, transfusion reactions continue to be perplexing, dangerous complications of transfusion therapy. One in every twenty transfusions may be accompanied by some ill effect.[1] Although most of these reactions are only disconcerting and uncomfortable for the patient, the potential always exists that they become life-threatening.

We shall review the common mild symptoms from transfusion of blood and blood products—urticaria, chills, and fever, as well as the dreaded but unusual complications of shock, acute renal failure, and hemorrhage. The great clinical problems of viral hepatitis, probably the most important adverse effect of transfusion, other infectious complications, circulatory overload, or isosensitization will not be detailed.

## Diagnosis of Transfusion Reactions

Reactions are recognized because of signs and symptoms listed in table 1. The symptoms and signs of transfusion reactions are divided into 3 groups: 1) urticaria, with no other signs, 2) fever, chills, tachycardia, etc., without shock, hemorrhage or red urine, and 3) shock, hemoglobinuria, oliguria, and bleeding.[2] Since each group of signs and symptoms may result from a variety of disorders other than a transfusion reaction, the physician must consider the clinical setting, e.g., fever and chills during transfusion of a patient with prior infection can be a diagnostic dilemma.

It may be seen from table 1 that no symptom-complex is pathognomonic of a hemolytic transfusion reaction.[3] Urticaria, chills and fever, chest-tightness, and tachycardia—signs and symptoms which are usually associated with nonhemolytic reactions, can be the early indications of a hemolytic reaction. Nausea and vomiting with red urine are often but not always associated with immune hemolysis. Flank pain, long thought to be an

TABLE 1: Signs and Symptoms of Suspected Transfusion Reactions Reported to a Large Blood Center Over a 7-Year Period.*

| | All Reactions % | Reactions with Evidence of Incompatibility % |
|---|---|---|
| Chills | 55 | 80 |
| Fever | 47 | 70 |
| Urticaria | 35 | 15 |
| Tachycardia | 28 | 25 |
| Chest-tightness | 7 | 25 |
| Dyspnea | 7 | 10 |
| Nausea and vomiting | 7 | 15 |
| Red urine | 5 | 15 |
| Flank pain | 5 | 0 |
| Rales | 3 | 0 |
| Shock | 2 | 10 |

* Adapted with permission from *Seminar on Hemolytic Transfusion Reactions*, American Association of Blood Banks, Oct. 1967.

---

* Medical Director, Central Kentucky Blood Center, 731 S. Limestone Street, Lexington, Kentucky 40508.

† Chief, Blood Bank Department, Clinical Center, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20014.

important indicator, is apparently a rare and unreliable symptom. Additional signs, important in the anesthetized patient, are generalized oozing from the operative field, borborygmi, and shock that is unrelieved by the administration of more blood.

Because the severity of injury from a hemolytic transfusion reaction is dose-related, transfusion should be interrupted if any of the symptoms appear. The intravenous route should be kept open with a slow saline infusion while diagnostic procedures are in progress.

### Pathogenesis of Transfusion Reactions

***Allergic reactions.*** Urticarial reactions are usually generalized but may be limited in distribution. The wheals are usually pruritic and are thought to be due to the release of vasoactive histamine from mast cells. The precise mechanisms which trigger histamine release are not clear, but immunologic activation of the kinin and complement systems is probably involved.[4] In this day of a hypermedicated donor population it is recommended that donors not be accepted who are taking any medication likely to be still present in their blood stream. It is not unusual to have the patient's chart flagged as allergic to various drugs including the aspirin that the donor may have taken before going to the blook bank. Although transfusions may have to be stopped in severe urticarial reactions which do not respond to antihistamines, urticaria is significant only in that it could be a harbinger of a more serious problem. Occasionally allergic reactions produce severe facial and laryngeal edema.

***Febrile reactions.*** Fever, chills, chest-tightness, and tachycardia are probably the most common reaction pattern to blood and its products. Since the picture may signal a hemolytic reaction, the transfusion must be stopped, and examination of blood and urine is required.

Routine checks for red-cell incompatibility are usually negative in these reactions, and their pathogenesis remains obscure until the development of new techniques to demonstrate leukocyte antibodies.[5,6] These antibodies, directed against HL-A (histocompatibility) antigens are produced by repeated exposure to foreign leukocytes and platelets. They seem to produce fever and chills by reacting with granulocytes, liberating proteolytic lysosomal enzymes. These reactions should no longer be called 'pyrogenic' since modern blood-packaging technology has all but eliminated the danger of classical pyrogens. Perhaps "pyrexic" or 'febrile, nonhemolytic' would be better names.

***Bacteremic reactions.*** Bacterial contamination is always a potential problem since it is impossible to completely sterilize the skin of the donor through which the blood-collection needle must pass. Bacteria which might enter the container are usually destroyed by intrinsic defense mechanisms in fresh blood. After a few hours these defense mechanisms are no longer protective, and cold storage is necessary to prevent bacterial growth. There are also rare donors who have a bacteremia at the time of blood donation. Since refrigeration must be relied on for control of bacteria, blood must be kept in refrigerators of high quality with temperature-recording devices and alarm systems. If blood is out of this controlled environment for longer than an hour is must be discarded. Failure to observe these precautions can result in serious reactions due to bacterial growth with hemolysis and sepsis of the donor blood. The processing of platelet concentrates which are often stripped of their granulocytes and then stored at room temperature is too new to know what risk incurs.

***Hemolytic reactions.*** Shock, hemoglobinemia with hemoglobinuria, oliguria, and hemorrhage are the dreaded complications of incompatible red-cell transfusion. All are due to the *in vivo* effects of incompatibility, but the mechanisms through which they are mediated are not entirely clear. Certainly hemoglobinuria does not produce renal failure in normal animals until hemoglobin reaches very high concentrations and is accompanied by low renal blood flow.[7] By contrast, incompatible red-blood-cell "ghosts", or stroma, washed free of hemoglobin, have been found to produce acute renal failure in both experimental animals and in man, which suggests that specific antigen-antibody reactions are a major cause of the acute renal failure that follows incompatible transfusion.[8]

Hemorrhage due to the transfusion of incompatible blood is even less well understood. Many now feel that cell-disruption releases substances which induce disseminated intravascular coagulation.[9,10] Neither hemoglobin nor compatible red-cell stroma initiate the coagulation process,[8] and despite considerable investigation the trigger mechanism remains to be found. Disseminated coagulation consumes fibrinogen and labile clotting factors such as Factors V and VII. There will be a prolongation of the prothrombin and partial thromboplastin times, a poor quality clot, and decreased fibrinogen levels. Thrombocytopenia is usually present, since platelets are consumed in the coagulation process. This consumptive coagulopathy may be further complicated by secondary activation of the fibrinolytic mechanism, presenting very difficult diagnostic and therapeutic problems.

***Delayed hemolytic reactions.*** In a patient who had compatible crossmatches and no detectable irregular red-cell antibodies at the time of transfusion, signs of red-cell destruction, such as bilirubinemia and unexplained drop in hemoglobin level 3 days to 3 weeks after transfusion, suggest a delayed hemolytic transfusion reaction.[11] Anamnestic response by the immune mechanism may reproduce an antibody previously present but undetectable, or a new antibody may arise in response to the transfused foreign antigens. The "lesser" blood groups (Kell, Duffy, Kidd, etc.) are commonly involved in delayed reactions. While usually not life-threatening because of their more gradual onset and prolonged course, delayed reactions are potentially fatal in the debilitated patient who has received large amounts of donor blood. Acute renal failure following a delayed hemolytic reaction has been reported.[12]

Until recently it was thought that almost all severe transfusion reactions were due to interaction of antibodies with red-cell or leukocyte antigens. Vyas et al[13] reported a number of cases of IgA-deficient patients whose serum contains anti-IgA activity. Transfusion of these patients with plasma and blood containing IgA produced severe anaphylactoid or allergic reactions. We have suggested that the immune reaction activates the complement and kinin systems, producing vasoactive materials and edema.[14] Gralnick and his co-workers[15] recently discussed several patients with an anti-$\gamma$-globulin factor in their serum who also had hemolytic transfusion reactions. Since no antibodies to known red-cell antigens are ever demonstrated, and the titer of antibody to $\gamma$-globulin increased after the reactions, the authors speculated about the possible role of anti-$\gamma$-globulin antibodies in the hemolytic episode.

## Prevention

The best way to reduce transfusion risks to the patient is to carefully evaluate the true need for the transfusion. Can the anemic patient be expected to replace his own red cells without other complications? Are other agents available to replace rapid blood loss? Will 2 units of blood suffice instead of 3? These decisions are the responsibility of the patient's physician. Once he has decided that the transfusion of blood or blood products is indicated, he is responsible for ensuring proper collection and identification of the patient's sample to be used for typing and crossmatching.

But the physician's responsibility does not end there. After the laboratory issues blood for transfusion a clerical check of the patient's identity and type with that of the label on the donor blood must be made at the bedside. Finally, the physician should ensure that adequate nursing attention is available, especially during the transfusion of the first 50 ml of each unit when symptoms of dangerous hemolytic reactions are most likely to begin.

The laboratory, for its part, should institute a system of checks and quality control which assure that a compatible unit is issued to the proper patient. Clerical errors are most common and are a real hazard when laboratory workers are overworked or asleep (a good reason for transfusing during the daytime).[16]

Another method of preventing the mild or minor transfusion reaction is removing offending substances, such as plasma, granulocytes from the blood by centrifugation, or washing techniques. Unfortunately, most systems for washing red cells free of plasma and leukocytes are quite time-consuming and involve multiple entries into the closed system with consequent risk of bacterial contamination. One method for removal of granulocytes is filtration on a nylon column (Leukopak, Fenwal Laboratories). The live phagocytes in warm heparinized blood adhere to the nylon fibers, and lymphocytes and plasma pass through. Conventional differential centrifugation in plastic bags is a simple but somewhat inefficient method of removing antigenic material.

Antihistamines and other drugs have been added to the blood at the time of transfusion to reduce the frequency of reactions, but premedication of either the blood or the patient is a real hazard. Why mask the early symptoms that are the recipient's physiologic 'cry for help'? An exception to this rule might be the patient who requires repeated transfusions and in whom repeated serological evaluation fails to demonstrate red-cell antibodies, and where even 'leukocyte-poor' blood products fail to ameliorate symptoms. Pre-medication of the patient (not the donor blood) may be the only way to prevent violent reactions. Such a patient obviously requires close watching during and after transfusion.

## Investigation of a Suspected Transfusion Reaction

The key move in any suspected reaction is to investigate. Valuable time should not be wasted in accusing or procrastinating when early adequate therapy could be preventing many of the dreaded sequellae of a hemolytic episode. Table 2 provides a brief outline of 1 approach to investigation.

Urticarial reactions unaccompanied by chills, fever, etc., require only a verification of identity of recipient and donor. All other reactions are potentially hemolytic and must be investigated as such. An anticoagulated blood sample should be drawn from the patient with care to prevent hemolysis. This blood should be centrifuged and the plasma examined carefully for free hemoglobin.

TABLE 2: Rapid Investigation of Suspected Transfusion Reaction

Clerical check by physician and laboratory
Examine patient's blood for:
1. Intravascular hemolysis (free hemoglobin).
2. Extravascular hemolysis (direct Coombs test).

Examine urine for hemoglobin and monitor its flow.
Examine donor plasma for bacteria and free hemoglobin.
Repeat group and type examination on samples from patient and donor.
Repeat crossmatches if necessary.

Simple visual examination is all that is necessary, since amounts of plasma hemoglobin which cannot be seen are rarely significant and quantitation of higher levels does little to guide therapy. A urine sample should be examined for free hemoglobin. If free hemoglobin is present in urine or plasma, the urine flow should be carefully monitored.

The plasma of the transfused blood should be examined also, since the presence of free hemoglobin indicates physical injury or bacterial contamination. If bacterial contamination is suspected, microscopic examination of a stained smear of donor's blood can show organisms. After the patient's blood is cultured and appropriate therapy begun,[17] the donor's blood should be cultured. If the plasma of the donor's blood is not red, any true hemoglobinemia in the patient is probably a sign of intravascular hemolysis.

After repeating group and type examinations on both recipient and donor's blood a direct antiglobulin (Coombs) test is performed on the patient's post-transfusion red cells. A positive test (with a pretransfusion sample as a control) is probably due to antigen-antibody reaction; but a negative direct Coombs test does not mean that such a reaction did not occur, since all of the antibody-coated cells may have already been destroyed.

With close cooperation of the laboratory, all of these examinations can be made in 15 to 20 minutes. Negative results make emergency treatment unnecessary and, if indicated, therapy may be cautiously continued with another unit of blood. If a hemolytic process is suspected, emergency treatment should be begun at once and not withheld pending further examination such as a repeat of group and type, repeat of crossmatches, interdonor crossmatches, serum bilirubin, etc.

## Treatment of Transfusion Reactions

An outline of therapy of transfusion reactions is given in table 3. Urticaria with no other signs can be treated by slowing the transfusion and giving intramuscular antihistaminics. If the rash clears promptly the transfusion may be resumed in 15 minutes. This is the only circumstance under which the transfusion may be restarted without laboratory appraisal. Severe urticarial or anaphylactic reactions often require intravenous antihistamines and corticosteroids.

Fever, chills, and other nonspecific problems should be investigated as described above. If no evidence of clerical error, incompatibility, or hemolysis is present, antipyretics and sedatives may be given. Should the patient's illness require additional transfusion, however, medications should not be given which might mask symptoms of reaction to additional blood. Pulse, temperature, blood pressure, and urine output should be monitored for several hours.

When shock, hemoglobinuria, oliguria, or bleeding complicate a transfusion, a true medical emergency exists. Acute renal failure is the most common important sequella of intravascular hemolysis, and steps must be taken promptly to assure adequate renal bloodflow, as indicated by urineflow of at least 100 ml per hour. Blood pressure may be maintained with drugs and volume replacement, and 25 gm of minnitol should be given intravenously. The mechanism by which mannitol protects the kidney is not clear, but it has been shown to increase renal bloodflow as well as urine output.[18] If it is to be effective, mannitol should be given as soon as a hemolytic reaction is suspected, since it is no longer helpful (and may be dangerous) once acute renal tubular necrosis is established. If acute renal failure does occur, dialysis and careful management of fluids and electrolytes will be required.

TABLE 3: Transfusion Reaction Therapy

Urticarial reaction:
  Intramuscular antihistaminics; resume transfusion if wheals clear and there is no fever
Febrile, nonhemolytic reactions:
  Antipyretics and sedatives if no more blood is to be transfused
  Watch carefully for signs of hemolysis
Hemolytic transfusion reactions:
  Maintain blood pressure (and renal bloodflow)
  Maintain urine flow over 100 ml/hour
    Mannitol, 25 gm IV
    Fluids
  Replace hematologic deficits when indicated
    Fresh plasma (or fresh frozen plasma)
    Platelets
    Red cells, whole blood, or fresh whole blood if necessary
  Heparin if hemorrhage is consistent with disseminated intravascular coagulation
Anaphylactic reactions:
  Intravenous antihistamines and corticosteroids
  Epinephrine

Bleeding due to transfusion of incompatible blood is especially difficult to treat. Specific deficiencies of blood, labile factors, or platelets must be replaced, and the cycle of intravascular coagulation-fibrinolysis must be interrupted. The issue may be between heparin for suspected disseminated intravascular coagulation and epsilon amino caproic acid (EACA) for secondary fibrinolysis. However, we believe that the fibrinolysis accompanying transfusion reactions is usually secondary to disseminated intravascular coagulation and that heparin is the agent of choice and should be given at once.

Septic shock due to transfused blood should be treated with potent broad-spectrum antibiotics and supportive therapy to maintain blood pressure and urine flow.

If physician, laboratory, and nursing staff all exercise care in blood transfusion, few incompatible blood reactions will occur. When reactions do occur, prompt investigation and appropriate therapy can avert serious or fatal sequellae.

## Summary

No sign or symptom is pathognomonic for a hemolytic transfusion reaction. Urticarial reactions are apparently mediated by histamine release and usually are of little clinical significance. Febrile, nonhemolytic reactions can be due to immune reactions to leukocyte and are important because they mimic the early signs of a hemolytic reaction. Hemolytic transfusion reactions may produce shock, acute renal failure, and a hemorrhagic diathesis. Isosensitization to IgA may produce anaphylactic reactions. Physicians, nurses and laboratory personnel share the responsibility for safe transfusion. Once a reaction has occurred, investigation of its nature and prompt treatment may avert tragedy. Early treatment with mannitol is strongly recommended when hemolysis is suspected.

## References

1. RANGREN, O. AND OTHERS: Acta Med. Scand., 1968, 162, 211.
2. SCHMIDT, P. J.: Transfusion reactions, in Conn, H. F., edited by: Current Therapy 1967. Philadelphia: W. B. Saunders, 1967, 256.
3. MYHRE, B. A.: Clinical aspects of transfusion reactions. Seminar on Hemolytic Transfusion Reactions. Chicago, American Association of Blood Banks, 1967, 9.
4. THOMPSON, J. S.: Ann. Intern. Med., 1968, 69, 361.
5. PERKINS, H. A. AND OTHERS: Vox Sang., 1966, 11, 578.
6. VAN ROOD, J. J. AND EERNISSE, J. G.: Sem. Hemat., 1968, 5, 187.
7. JAENIKE, J. R.: J. Clin. Invest., 1967, 46, 378.
8. SCHMIDT, P. J. AND HOLLAND, P. V.: Lancet, 1967, 1169.
9. MCKAY, D. G. AND OTHERS: Amer. J. Surg., 1955, 89, 583.
10. MAMMEN, K. AND PATEL, S. J.: Indian J. Med. Sci., 1966, 20, 955.
11. CROUCHER, B. E. E., CROOKSTON, M. C. AND CROOKSTON, J. H.: Vox Sang., 1967, 12, 32.
12. HOLLAND, P. V. AND WALLERSTEIN, R. O.: J.A.M.A., 1968, 11, 1107.
13. VYAS, G. N., PERKINS, H. A. AND FUDENBERG, H. H.: Transfusion, 1968, 8, 309.
14. MILLER, W. V. AND OTHERS: Ann. J. Clin. Path., 1970, 54, 618.
15. GRALNICK, H. R., MCGINNISS, M. H. AND ROSENFIELD, R. E.: Transfusion, 1968, 8, 310.
16. SCHMIDT, P. J. AND KEVY, S. V.: Transfusion, 1963, 3, 198.
17. BRAUDE, A. I.: New Eng. J. Med., 1958, 258, 1289.
18. Mannitol and renal function. Lancet, 1968, 1183.

# Transfusion in Washington 100 Years Ago*

PAUL J. SCHMIDT, M.D.

IN 1871, one of the most complete reviews of blood transfusion therapy as known to that date was read before the Medical Society of the District of Columbia. The review was later published in the predecessor to this journal, the short-lived National Medical Journal of 1871-1872.[1]

The author of that scholarly review was Dr. W. B. Drinkard, Demonstrator in Anatomy at the National Medical College and founding surgeon at the then new Children's Hospital. Although there is no record in the literature or in the archives of Children's Hospital[2] that Drinkard ever performed the operation himself, transfusion was practiced frequently in the 20 years after his paper appeared. His was first of many reviews in State and regional medical journals between 1870 and 1890, and they draw on the information in Drinkard's report.

The physiologic basis of transfusion was explored and well described by the British obstetrician, James Blundell, in his many published works 50 years before Drinkard. Drinkard gives all credit to the excellent description in Blundell's "Principles and Practice of Obstetricy" and even tells us that the work was "printed in this city, perhaps the earliest of the very few medical books issued here." That important volume, stereotyped and published by Duff Green, Washington 1834, is in the current holdings of the Medical Society.

Drinkard described the animal blood transfusion experience of the 17th Century and more than 100 cases of human blood transfusion in Europe. He cited 3 cases of transfusion of human blood in Philadelphia and said, "During the War the operation was performed once in this city at the Quartermaster's hospital with encouraging temporary effect but with final insuccess." He added, "I can hardly think that all American cases are comprised in this list of 4." Certainly the Washington medical community of 100 years ago had adequate knowledge of transfusion, although Drinkard was unaware that the first human blood transfusion was given in this country in 1795. Before the Civil War there were other transfusions given in Philadelphia, New Orleans and Chicago[3] and also in Charleston.[4]

Washington was a city of hospitals in the Civil War with a collection of medical talent from all over the North, and transfusion may not have been as rare locally as Drinkard thought. Surgeon General William A. Hammond of Annapolis had himself experimented with transfusion therapy in 1849,[3] and there is record of a transfusion at the Grosvenor Branch Hospital in Alexandria in 1864.[5]

Certainly Drinkard succeeded in his aim of "calling attention to a somewhat neglected point of operative surgery, which, for its simplicity of application, the brilliancy of its results, and the comparative oblivion which has enshrouded it of late years, has, perhaps, no parallel in the list of surgical remedies." Of course as transfusion came into greater use after his suggestion, the many possible complications became evident, and before the end of the 19th Century transfusion was again enshrouded with comparative oblivion. Landsteiner did the work in 1900 that went largely unrecognized for more than 20 years. It has now taken 50 more years to establish our most current knowledge of transfusion demonstrating that for most patients, components and not whole blood are optional. Speaking of "points of doctrine, therapeutic agents or surgical applicances" Drinkard said in his stately prose ". . . . born and reborn, as it were, in difficult travail, acknowledged, legitimatized, holding a place conquered by painstaking research and elaborate clinical investigation, seem fated always to stand among the 'novelties,' and to bear continually, despite their venerable titles, the odium that has attached itself to the youth of most really useful of striking discoveries. Among the latter must be counted the operation of the 'transfusion of blood,' a procedure antecedent, in its hypothetical geneology, even to circumcision."

## References

1. DRINKARD, W.B.: History and Statistics of the operation of transfusion of blood. Nat. Med. J., 1871-72, 2, 180.
2. PARROTT, R.H.: Personal Communication
3. SCHMIDT, P.J.: Transfusion in America in the eighteenth and nineteenth century. New Eng. J. Med., 1969, 279, 1319.
4. WILSON R.: Medicine in the days of the Confederacy. J.S. Carolina Med. Ass., 1970, 66, 169.
5. KUHNS, W.J.: Blood Transfusion in the Civil War. Transfusion, 1965, 592-94.

---

* From the Blood Bank Department, Clinical Center, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20014.

# Opportunities for Progress Against Cancer

CARL G. BAKER, M.D.*

WHEN PRESIDENT FRANKLIN D. ROOSEVELT affixed his signature to the National Cancer Institute Act on August 5, 1937 the Federal Government threw its weight into the most concerted effort ever undertaken to gain control over malignant neoplastic diseases which, grouped together under cancer, had become second to cardiovascular diseases in mortality. At that time Federal activity in the cancer field was limited to the work of 2 small research groups, 1 stationed at Harvard University and the other at the Hygienic Laboratory in Washington, D. C. No support was provided to scientists conducting cancer research at universities or other non-government institutions.

The Act through which the Government assumed the leadership of a national effort against cancer had taken 10 years of devoted effort on the part of scientists, physicians, political figures and others alert to the growing threat of cancer. They knew that only the Federal Government could build up to the level of research support required to tackle such a complex problem and that this level was clearly beyond the ability of industrial or private means to provide.

The first appropriation of $400,000 to the National Cancer Institute was considered to be a substantial one at the time. Half of the money was allocated for the purchase of radium to be loaned to hospitals; the remainder was divided between the Institute's intramural research program consolidating the 2 existing research programs in the new Institute at Bethesda, Maryland, and an extramural program of research grant support to non-government scientists, planned and carried out in consultation with the National Advisory Cancer Council which was established by the same Act.

The research challenge of cancer was considered to be as formidable as the threat of the disease itself. The prevailing view in the bioscience community was that much more would have to be learned about the basic nature of cancer before any practical solution to the problem could be found. Emphasis was therefore given to basic studies of cell-growth, biology and biochemistry, and to the experimental induction of cancer in laboratory animals. The few studies of human cancer were largely epidemiological.[1]

Research along these lines went forward with only slightly increased funding during the first decade of Federal participation. The total amount apropriated between 1938 and 1947 was only $6,500,470, but in the next 5-year period appropriations totaled $101,142,750, and from 1953 on, annual funding was in the millions of dollars. Even so, 83.8% of the appropriations made to the National Cancer Institute since its inception was approved in the decade of the sixties, the fiscal 1971 appropriation alone totaling $230,383,000. It is anticipated that over 80% of these funds will be distributed throughout the Nation in the form of contracts and grants.[2]

For the fiscal year 1972 President Nixon has requested an appropriation of $234,338,000 for the National Cancer Institute.[3] In his State of the Union Message in January he called for the launching of an intensive campaign to find a cure for cancer. He stated that "The time has come when the same kind of concentrated effort that split the atom and took man to the moon should be turned toward conquering this dread disease." He called for us to make a total national commitment to achieve the goal. He called for an extra $100 million and said he would ask later for any additional funding that could be effectively used for cancer research. In his Health Message delivered in February the President further announced that he was directing the establishment of a Cancer Conquest Program at the National Institutes of Health to coördinate the cancer research work of scientists in many fields in an expanded and intensified effort to bring cancer under effective control.

"The time has come," the President said, "to put more of our resources into cancer research and—learning an important lesson from our space program—to organize those resources as effectively as possible." Mindful that the challenge of the space program was technological and did not require new major theoretical breakthroughs, Mr. Nixon said that at the same time we should recognize that, of all our research endeavors, cancer research may now be in the best position to benefit from a great infusion of resources.

This call to action is based on a new ferment on the part of the scientific community, the Congress, the press, and the public. The rate of appearance of important scientific leads in several areas of

---

* Director, National Cancer Institute, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20014.

biomedical research, particularly the viral oncology and molecular biology areas, has increased appreciably in the last few years. Progress in drug treatment has been noted in many instances by parents of leukemic children, observing that some of their children have been able to return home from the hospital and re-enter school, some with long-term remissions and some possibly cured. Long-term remissions and even cures of some other kinds of cancers by means of drugs are now established. The managerial apparatus required for large-scale multi-discipline, coördinated cancer research programs has been developed and made operational on a sizable scale. The press has increased its coverage of cancer research appreciably over the past couple of years. Letters from the public on cancer increased greatly this past year, and it has long been known that the public has much interest in the cancer field and is cognizant of cancer's high personal and economic costs. For example, a poll a few years ago showed that 62 % feared cancer more than any other disease. Blindness was the next most feared (18%), and 9 % feared heart disease most. All of these developments point toward the possibility of a new order of activity in cancer research.

A call for a greatly expanded cancer research effort is also made in the Report[4] of the National Panel of Consultants on the Conquest of Cancer, a group created last April by a Senate Resolution (S. Res. 376).

## The Base of Research Progress and Future Opportunities

The state of the art at present permits the new kinds of approaches to the cancer problem envisioned for the decade of the seventies. The progress made in accumulating knowledge of cancer and the continuing need for serious effort aimed at solving major problems in this field have transformed the National Cancer Institute from a laboratory research venture in its early years to a broad research and development effort marshaling the resources of laboratories and clinics throughout the country with the objective of controlling cancer in man. The emphasis has shifted to add programmed research with a broad, cancer problem-solving purpose as a complement to the older system consisting primarily of single, more or less unrelated projects conducted by individual investigators or small laboratory groups.[5–8] Thus, the universe of cancer research today covers a broad spectrum from exploratory or fundamental research to developmental and applied research. The goal is to reduce mortality from cancer by a full-scale, broad research and development attack, and by making the benefits of research available to the largest number of people as rapidly as possible.

Developments in research on prevention and treatment are moving at a rapid pace, especially in the areas of virus causation[9] and drug therapy[10] of some forms of cancer. Some kinds of human cancer are now curable by drugs. The effective agents in use in various combinations include methotrexate, 6-mercaptopurine, prednisone, cyclophosphamide, vincristine, cytosine arabinoside, daunomycin, BCNU, and L-asparaginase. The cures occur in rapidly growing cancers but not in 100% of the patients, although longer remissions are occurring in these cancers.[11] These cancers include choriocarcinoma, Burkitt's lymphoma, Ewing's sarcoma, Wilms' tumor, embryonal testicular cancer, Hodgkin's disease, and leukemias. Many of them occur in younger people. These constitute about 15 % of all human cancers.[12]

It is probable that childhood leukemia is properly included among examples of cured cancers,[13] although it is too early to be absolutely sure. In special centers where treatment is by means of combinations of drugs with proper supportive therapy (including transfusion of blood platelets to combat hemorrhage) 95% of the children can be made free of the signs and symptoms of the disease.[14] More than 70% of these children are alive 2 years after diagnosis. About 200 patients with leukemia have been identified who have remained free of evidence of the disease for 5 or more years.[15] Prior to the advent of drug treatment of leukemia in children 70% were dead 2 months after diagnosis, and nearly all after 3 to 4 months. Moreover, life-table curves over a period of several years show mortality rates for groups of patients treated with certain combinations of drugs to be identical to the rates for comparable control groups.[16]

Considerable understanding of the way drugs work in these rapidly growing tumors has been achieved and offers guidance for future work. The major thrusts for the future are to learn whether these same drugs, used in a different way, will be effective in the more common tumors, or whether new drugs must be found by modifying the system developed for producing the present successes.[17] Many research leads are available, and the scientific and managerial principles learned to date can now be applied more intensively to the common forms of human cancers. Knowledge gained through intensive research efforts in the decade of the sixties is making possible the extension of these gains to more and more patients; and although there are obstacles to 100% success in the potentially drug-curable patients, the coming decade should see many of these obstacles overcome through research, permitting the cure of more than 15% of those with otherwise fatal cancer.

A key problem is to predict from animal systems the delivery of a safe but tumor-destructive amount of drug to the tumor cell at a time in its division cycle when it is highly vulnerable. The opportunity exists for solving this problem in the laboratory in the next 5 years and for developing a broad program of clinical evaluation by 1980 for most of the major cancers in man. New drugs and concepts cannot be tested rapidly, however, in the clinical resources available today. There is a need for quick expansion of these resources at the National Cancer Institute and in other cancer centers. Planning should be started immediately for the construction and staffing of multidisciplinary centers in at least 6 sections of the country where none now exists. As a backup for clinical research, the number of chemical compounds and natural products being screened through animal tumor systems for anticancer activity should be increased from the present rate of 15,000 to a new level of 50,000 a year to insure increased supply of new drugs beyond the current level of 6 per year. Furthermore, the addition to the primary screen of new animal models that mimic the biology of human tumors should enhance our ability to control drug-resistant tumors with both new and known drugs. Much greater emphasis could then be given to studies of such drug non-responsive common tumors as cancers of the large intestine, breast, lung, pancreas, bladder, and prostate gland.

In programs aimed at prevention, research results are coming rapidly in virus-cancer research. During the past few years it has been demonstrated that several cancers in experimental animals are caused by 3 classes of virus. To date about 110 of the nearly 1000 known viruses have been shown to produce cancers in many species of animals. In some cases vaccine protection can prevent development of cancers.[18] The evidence has been accumulating rapidly that several kinds of cancers in man are likely caused by viruses or by genetic information which, in some circumstances, is included in a virus. Human cancers for which the evidence is strong that viruses appear to be involved include leukemias and lymphomas, nasopharyngeal cancers, sarcomas, breast cancer, and possibly cancer of the uterine cervix, colon, and melanoblastoma.[19] For some types of cancer the evidence is building toward a unified theory[20] which suggests that chemical means or immunological means other than conventional vaccination may be required to block the action of the virus or the viral genetic material which can become incorporated into a cell and cause change into cancer. The important advances in understanding how functioning of the body cells is controlled, as well as understanding heredity, rest upon a rich base of knowledge that can be brought to bear in understanding the cancerous changes brought about by viral action.

Largely within the past year a series of related findings have been reported which bring together research in prevention, diagnosis, and treatment of certain cancers. These findings are expected to improve early diagnosis, aid identification of specific factors responsible for the initiation of these cancers, and open up additional approaches to treatment. Interdisciplinary studies toward these objectives are being pursued by top scientists throughout the country in a coördinated attack with scientists within the NCI. Firstly, enthusiastic optimism of many scientists derives from the finding of the enzymes polymerase and ligase in more than 30 viruses capable of causing leukemias, sarcomas, lymphomas (e.g., Hodgkin's disease) and breast cancers in laboratory animals, and essentially absent from many viruses not known to produce cancer. These enzymes can be isolated directly from the viruses and have also been isolated from cancers produced by these viruses.[21-24]

Secondly, these enzymes have now been found in human patients afflicted with these types of cancer, including breast cancer.[25] Also, they have been found in human leukemia cells but not in normal human white blood cells.[26] While some normal animal and human tissues contain similar enzymes, there is now evidence that enzymes associated with tumor viruses are different.

Thirdly, 3 classes of drugs have been identified that can block or interrupt the activity of polymerase.[27] This has important implications for both treatment and prevention studies. In several experiments, for instance, cancer cells from patients with leukemia or sarcoma have been killed in the test tube following addition of small amounts of these drugs, whereas normal cells remained unaffected.[28] The finding of this material in human cancers adds additional presumptive evidence that viruses are the causative factors. Some of these drugs may also prove to be useful in blocking the cancer-causing action of viruses. An intensive effort is under way to analyze additional types of human cancer, to find and produce drugs of even higher activity against the enzyme, and to evaluate the active drugs for safety and potency in animals, looking toward successful treatment of cancers in man.

Part of the excitement among scientists with the advances in virus-cancer work relates to the accompanying enlargement of our understanding of heredity or genetics and of how the body cells' functioning is controlled. Such understanding offers hope of eventual correction of diseases produced by malfunctioning of the genes of the chromosomes.

Closely related to this area is the first synthesis of a gene by Khorana.[29] This difficult achievement points the way to eventual synthesis of human genes, and perhaps correction of the chemical errors in human cells that are responsible for cancer and other diseases.

The knowledge and technology are ready for sizable expansion and for development leading to prevention. Efforts in this field of cancer research of highest relevance, priority and need remain: improved means of detection, propagation and isolation of viruses from additional cancer patients; more efficient means of producing and purifying viruses on an industrial scale; required technology for producing and testing safe and potent vaccines when feasible; and surveys to determine which individuals and populations are at greatest risk to cancers of suspected viral origin.

About 1,000 chemical agents have been shown to produce cancers in animals,[30] and about 20 have been shown to produce cancers in man.[31] With the introduction of about 200,000 new agents each year, testing for their cancer-causing capabilities is needed, and efforts for interfering with their action need to be intensified. The methods for conducting such research have been developed to a point where large efforts may now be pursued. Some leads exist which suggest that a quicker test may be developed to replace the slow, costly animal testing that is now necessary.[32] Whether testing in animals or by simpler assays in tissue culture are used, the results must be correlated with information on cancer causation in man. These latter studies involve complex investigation in special population groups. Plans are laid for such work.[7] The major needs are better means for identification and removal of hazardous chemicals in the environment, enhancement of the body's ability to detoxify these agents, better understanding of carcinogens such as radiation, and more rapid and sensitive means to detect and bioassay the cancer-inducing efforts of chemicals for man.

Underlying and supporting the major thursts of research must be a continuous effort in the many fields of fundamental scientific investigation to which all disciplines in biomedical science contribute. Practically all outstanding virologists and immunologists are now pursuing research either directly or indirectly related to cancer. Geneticists and molecular biologists are likewide involved. Essential to the full vigor of cancer research is the enlargement of concepts of how disease conditions develop, which is gained through studies in such fields as nutrition, metabolism, biochemistry, and biology. Special promise of rapid progress exists in immunology[33] and molecular biology investigation.

## Design for a Large-Scale Endeavor

Developments such as these form the basis for planning a large-scale research and development program on cancer, drawing upon progress made in both the scientific and management areas since World War II. In line with the President's call to action, a total national plan has been outlined that sets forth in some detail the scientific and managerial bases for such expansion, and it projects needed capacities and resources. It proposes, in addition to maintaining and strengthening a grant-supported, loosely structured investigator-initiated research effort along current lines, a large-scale coördinated, multidiscipline research and development endeavor aimed at producing the means by which significant reductions in mortality in different human cancers can be achieved over the next 5 to 20 years. Objectives are outlined in terms of key problems which, if solved, will produce reductions in human cancer incidence and mortality. Two to 5 key problems which will become program targets for intensive attack will be defined for each of the following areas: 1) early and advanced cancers, 2) the steps involved in cell-transformation from normal to cancerous, and 3) precancerous states. The proposed effort emphasizes prevention and treatment and will set forth multiple approaches to solving the selected key problems. Different approaches for each problem will be implemented simultaneously. In the delineation of these program approaches and further details necessary for future planning and defining of resources requirements, large numbers of expert scientists will be asked to participate. It is essential that these scientists and many others be motivated to join a single national cancer effort, make a commitment to the program and its objectives, and achieve the high quality work required in a timely manner. The managerial apparatus or system required must be an adaptable organization that can respond quickly to unforeseen opportunities and problems.[34] It must insure continual revision of the program plan and operations as new information is generated, received, analyzed, and acted upon.

In such a large-scale effort, major cancer centers[35] will have an important role in providing foci for multidisciplinary efforts within a single framework of cancer, including research on causation, prevention, diagnosis, and treatment. Specialized centers such as those for radiation carcinogenesis, epidemiology, etc. will also be included.

An overlying 'nervous system' for the large-scale cancer program will be necessary to insure influx of key information, proper coördination, and planning for future efforts, and for modifying the direction the program should take as new information becomes available.

### Objective: Effective Control

The President, in his 1971 Health Message, called for the creation of a Cancer Conquest Program at the National Institutes of Health. The Program can, if approved and funded by the Congress, provide an advantageous setting for mobilizing both scientific and managerial resources for a new intensified attack on the cancer problem. The program will be built upon the experience of the National Cancer Institute in mobilizing the scientific resources of universities, independent research institutions, and the industrial establishment to develop new and to exploit existing research leads at both the nonclinical and clinical levels. The experience of the National Cancer Institute in the adaptation of new management techniques to biomedical research planning will be enlarged to increase the momentum of progress already established.

The research challenge in cancer is great. Although many more patients are being successfully treated today than at the time the National Cancer Institute was established, the incidence rate continues to overrun the cure rate, and ground is thus being lost. More than 52 million Americans (1 in 4 persons) now living will eventually develop cancer according to present rates. In the 1970's, if current trends continue, we can expect 3.5 million cancer deaths, 6.5 million new cases, and 10 million persons under medical care for this category of diseases.

If a national program is to succeed, it will take the kind of commitment called for by the President in his State of the Union message. The commitment must be made at all levels—the President, the Congress, the public, the press, the scientists, and the non-scientists, and the commitment must be made with determination to produce high-quality work and results as soon as possible.

### References

1. SHIMKIN, M. B., editor: J. Nat. Cancer Inst. Twentieth Anniversary NCI, 1957, 19.
2. DHEW House Hearings on Appropriations for 1971, Washington, D. C.: U. S. Government Printing Office, 1970.
3. Justifications of Appropriation Estimates for Committee on Appropriations, Fiscal Year 1972, Vol. VII, National Institutes of Health, U.S. Department of Health, Education and Welfare, Public Health Service, Washington, D.C.: U.S. Government Printing Office, 1971.
4. National Program for the Conquest of Cancer, Senate Report No. 91-1402, Washington, D.C.: U. S. Government Printing Office, 1970.
5. BAKER, C. G., CARRESE, L. M., AND RAUSCHER, F. J.: Symposium on Some Recent Developments in Comparative Medicine, Proceedings of the Zoological Society of London, No. 17, London: Academic Press, 1966, 259.
6. ZUBRUD, C. G. AND OTHERS: Cancer Chemother. Rep., 1966, 50, No. 7.
7. SAFFIOTTI, U. AND BAKER, C. G.: Inhalation Carcinogenesis, AEC Symposium Series 18, 1970, 467.
8. CARRESE, L. M. AND BAKER, C. G.: Management Science, 1967, 13, B420.
9. RAUSCHER, F. J. AND O'CONNER, T. E.: Cancer Medicine. Philadelphia: Lea and Febiger, in press.
10. Proceedings, Sixth National Cancer Conference. Philadelphia: J. B. Lippincott Co., 1970, 571.
11. Progress Against Cancer 1970, A Report of the National Advisory Cancer Council, National Institutes of Health, U.S. Department of Health, Education and Welfare, Public Health Service, Washington, D.C.: U.S. Government Printing Office, 1970.
12. ZUBROD, C. G., personal communication.
13. BURCHENAL, J. H.: Postgrad. Med., 1970, 48, 164.
14. HENDERSON, E. S.: Cancer, 1968, 21, 595.
15. BURCHENAL, J. H.: Proceedings, Sixth National Cancer Conference. Philadelphia: J. B. Lippincott, 1970, 127.
16. HOLLAND, J. F.: J.A.M.A., 1969, 209, 1511.
17. BAKER, C. G.: Postgrad. Med., 1970, 48, 119.
18. FRIEND, C. AND ROSSI, G. B.: Int. J. Cancer, 1968, 3, 523.
19. Special Virus Cancer Program, National Institutes of Health, U.S. Department of Health, Education, and Welfare, Public Health Service, Washington, D.C.: U.S. Government Printing Office, 1969-70.
20. HUEBNER, R. J. AND TODARO, G. J.: Proc. Nat. Acad. Sci. U.S.A., 1969, 64, 1087.
21. BALTIMORE, D.: Nature, 1970, 226, 1209.
22. TEMIN, H. M. AND MIZUTANI, S.: Nature, 1970, 226, 1211.
23. ROKUTANDA, M. AND OTHERS: Nature, 1970, 227, 1026.
24. SPIEGELMAN, S. AND OTHERS: Nature, 1970, 227, 563.
25. SPIEGELMAN, S.: Paper presented at American Association for Cancer Research, Chicago, 1971.
26. GALLO, R. C., YENG, S. S. AND TING, R. C.: Nature, 1970, 228, 927.
27. WEHRLI, W., KNUSEL, F., SCHMID, K. AND STAEHELIN, M.: Biochim. Biophys. Acta, 1968, 157, 215.
28. CALVIN, M., JOSS, V. R., HACKETT, A. J. AND OWEN, R. B.: Proc. Nat. Acad. Sci. U.S.A., in press.
29. KHORANA, H. G. AND OTHERS: Nature, 1970, 227, 27.
30. SHUBIK, P. AND HARTWELL, J. L.: Survey of Compounds Which Have Been Tested for Carcinogenic Activity, Second Edition, Supplement 1 and Supplement 2. PHS Publication No. 149, U.S. Department of Health, Education and Welfare, Public Health Service, Washington, D.C.: U.S. Government Printing Office, 1951, 1957, 1969.
31. HUEPER, W. C. AND CONWAY, W.D.: Chemical Carcinogens and Cancer. Springfield, Illinois: Charles Thomas Publications, 1964.
32. MACPHERSON, I.: Advances Cancer Res., 1970, 13, 169.
33. KLEIN, G.: Fed. Proc., 1969, 28, 1739.
34. WEBB, J. E.: Space Management: The Large Scale Approach. New York: McGraw-Hill, 1969.
35. Cancer Research Centers, National Cancer Institute, U.S. Department of Health, Education, and Welfare, Public Health Service, 1968.

# Genetic Counseling*

ROSCOE O. BRADY, M.D.

PHYSICIANS IN THE WASHINGTON area are fortunate in having in their midst some of the country's most skilled practitioners of the art of amniocentesis. The transabdominal approach is now considered the most facile and the most extensively used route for obtaining samples of amniotic fluid with its complement of desquamated cells. Most obstetricians wait until the 14th gestational week before undertaking this procedure, but occasionally earlier samples have been obtained successfully. The fetal cells in the fluid are usually concentrated by centrifugation and transferred to tissue culture (fig. 1). After the cells have multiplied to a suitable number in the course of 3 to 4 weeks in culture 2 types of testing are carried out. The first of these is an analysis of the chromosomes in order to detect abnormalities of the karyotype which occur in Down's syndrome (mongolism). In this condition there may be an extra chromosome (trisomy) or chromosomal translocation. Both of these aberrations can be recognized by careful examination of the fetal chromosomes.[1] The risk of mongolism increases with increasing maternal age and is as high as 1 in 60 pregnancies in women over 40 years old. Many counselors now suggest that all pregnancies in women in this age group should be monitored for Down's syndrome.

The second aspect of fetal-cell analysis deals with the determination of the activity of specific enzymes in cells obtained from pregnancies at risk for an increasingly large number of metabolic diseases.[2,3] These heritable conditions range from disorders of carbohydrate metabolism as in the glycogen storage diseases, e.g., Pompe's disease, to abnormalities of amino-acid metabolism such as homocystinuria. Faulty metabolism of purines occurs in conditions such as the Lesch-Nyhan syndrome which is characterized by mental retardation, high uric acid excretion, and self-mutilation. Perhaps the best characterized group of inherited metabolic diseases deals with abnormalities of lipid metabolism. In all of the 9 disorders which have been identified at this time there is an accumulation of an excessive quantity of a particular lipid in the brain and various systemic organs in each of the separate diseases. I shall devote a considerable portion of this communication to a discussion of methods presently available for monitoring pregnancies at risk for lipid storage diseases for 2 principal reasons. First, the techniques employed in detecting fetuses with these conditions have been brought to a high degree of accuracy and are now effectively practiced at several medical centers. Second, procedures have very recently been perfected by which healthy heterozygous carriers of these disorders can be identified. Together these developments serve as exemplary models of the application of basic medical research to practical human benefit.

Lipid storage diseases are relatively uncommon clinical entities, as in fact are most of the heritable metabolic diseases. Generally the clinicians hear of conditions such as Tay-Sachs disease and perhaps Gaucher's disease in medical school, and this may be their first and last encounter with these terms. These lipid-storage diseases show a predilection for manifesting themselves in individuals of Ashkenazic Jewish ancestry, but all races are involved to some extent. The afflicted children are usually severely retarded, and with the exception of Tay-Sachs disease generally show enlargement of the spleen and liver and rarefaction of the long bones (table 1). However, the busy clinician must be alerted to certain exceptions to these remarks. There are a number of patients in this area with less severe forms of at least 2 of these diseases, and they are entirely free of central nervous-system impairment. These are patients with the so-called "adult" forms of Gaucher's disease and the less frequently encountered Niemann-Pick disease. Furthermore, patients with Fabry's disease have distinctly different neurological problems. In these patients the primary difficulties concern the peripheral nervous system and are characterized by neuralgias with generally normal mental development.

## Genetics

Except for Fabry's disease, all of the disorders of sphingolipid metabolism are inherited as autosomal recessive mutations. This means that the genetic defect is carried on 1 of the non-sex chromosomes and that both parents must be carriers of the disease in order to have an affected child. The heterozygous

---

* From the Laboratory of Neurochemistry, National Institute of Neurological Diseases and Stroke, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20014.

PRENATAL DIAGNOSIS OF GENETIC ABNORMALITIES

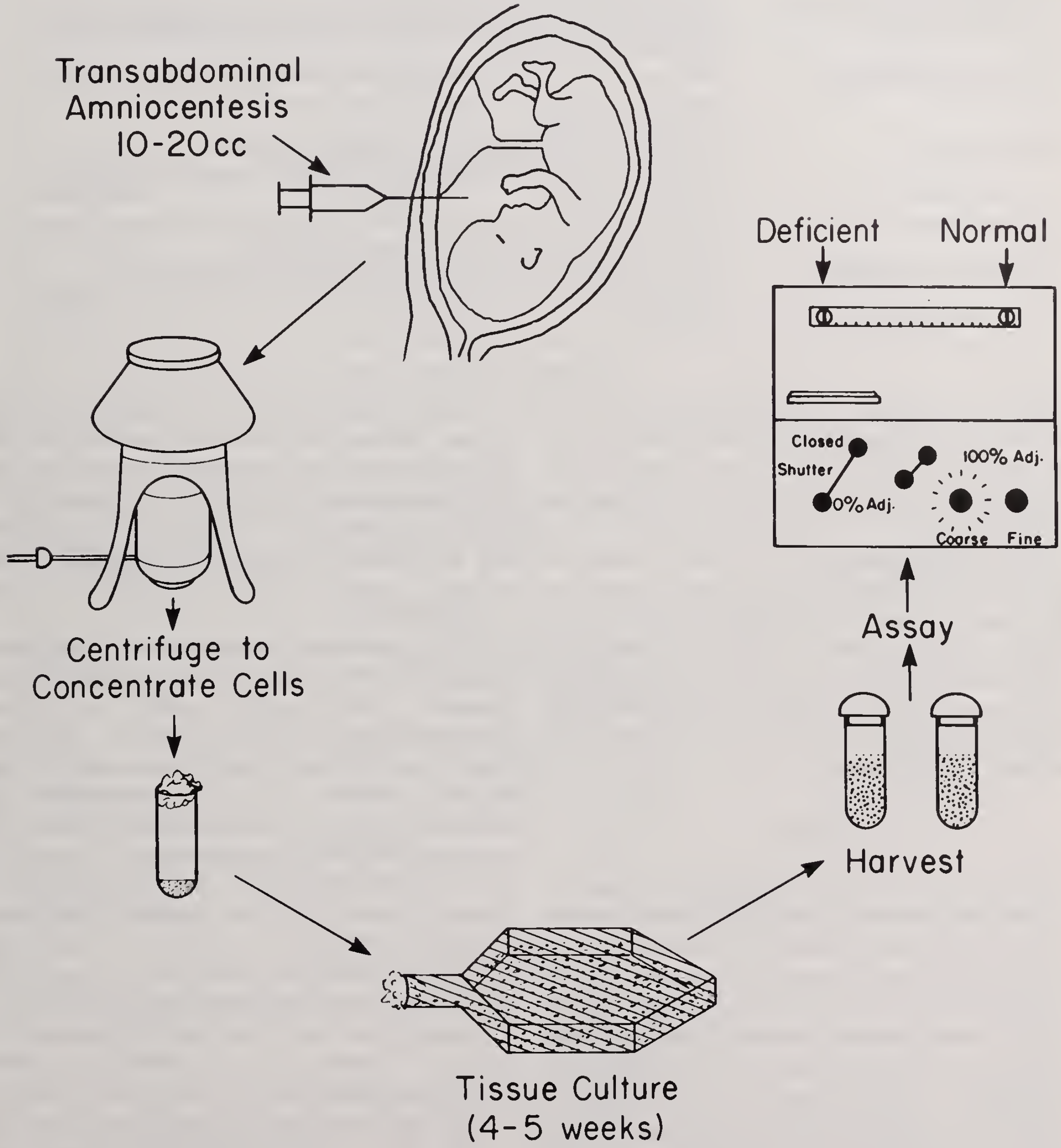

Transabdominal
Amniocentesis
10-20cc
Centrifuge to
Concentrate Cells
Tissue Culture
(4-5 weeks)
Harvest
Assay
Deficient
Normal
Closed
Shutter
0% Adj.
100% Adj.
Coarse
Fine

TABLE 1: Clinical Features of the Sphingolipidoses

| | |
|---|---|
| Gaucher's disease | Mental retardation (infantile form only), hepatosplenomegaly, hip and long bone involvement, Oil-red-O and PAS-positive lipid-laden (Gaucher) cells in bone marrow, increased serum acid phosphatase, mild anemia, and thrombocytopenia. |
| Niemann-Pick disease | Generally similar to Gaucher's disease; 30% with cherry-red spot in macula; marrow cells (foam cells) stain for both lipid and phosphorus, cachexia. |
| Globoid leukodystrophy (Krabbe's disease) | Mental retardation; almost total absence of myelin, severe gliosis, and multinucleated "globoid bodies" in white matter. |
| Metachromatic leukodystrophy | Mental retardation; psychological disturbances (adult form); decreased nerve-conduction time; nerve biopsy shows yellow-brown droplets when stained with cresyl violet (metachromasia). |
| Ceramide lactoside lipidosis | Slowly progressing CNS impairment; hepatosplenomegaly; macrocytic anemia, leukopenia and thrombocytopenia due to involvement of bone marrow and spleen. |
| Fabry's disease | Reddish-purple maculopapular rash in umbilical, inguinal and scrotal areas; renal impairment; corneal opacities; peripheral neuralgias and abnormalities of ECG. |
| Tay-Sachs disease | Mental retardation, amaurosis, cherry-red spot in macula, macrocephaly, neuronal cells distended with "membranous cytoplasmic bodies". |
| Generalized gangliosidosis | Mental retardation, cherry-red spot in macula (50% of patients), hepatosplenomegaly, foam cells in bone marrow, rarefaction of all bones, and skeletal deformities. |

carriers do not show clinical manifestations of the diseases, and on a statistical basis only 1 out of 4 of their children will be afflicted. Two of the children will be carriers like the parents, and 1 child will not be involved at all.

The mode of inheritance of Fabry's disease is different. It is an X-chromosome linked abnormality. The disease is carried by females only, who may themselves have mild ocular or cutaneous manifestations of the disorder. Of the sons born to a Fabry carrier female, half will have the full-blown syndrome, half will be unaffected, and 50% of her daughters will be carriers.

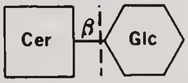
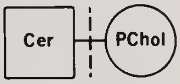
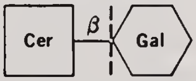
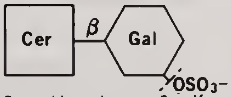
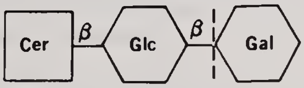
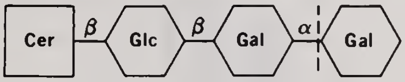
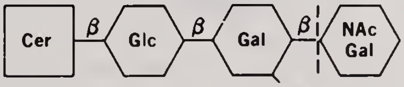
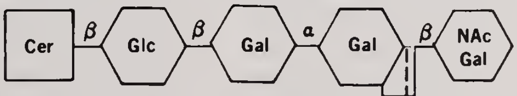
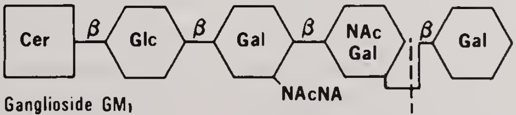
## Praxis

The primary stumbling block in the management of genetic disorders has been the absolute necessity for the concrete identification of the nature of the underlying abnormal enzymology. The resolution of this aspect of these diseases is a pre-requisite for the development of assay procedures for the diagnosis of patients with such diseases, for the detection of heterozygous carriers, and for the prenatal identification of fetuses afflicted with hereditary metabolic disorders. This disclosure was first accomplished in the lipid storage diseases through studies on the etiology of Gaucher's disease. The substance which accumulates in the tissues of patients with Gaucher's disease is a glycolipid called glucocerebroside (fig. 2), a normal minor tissue component. In tissues of patients with Gaucher's disease the quantity of this lipid may increase many hundred fold, particularly in the spleen where it may constitute as much as 4% of the weight of the organ. It was known more than a decade ago that overproduction of this compound was not the cause of the accumulation of the excessive quantities of the lipid.[4] Five years later the metabolic derangement was conclusively shown to be a deficiency of an enzyme required for the catabolism of this substance.[5,6]

The accumulating glucocerebroside in peripheral tissues most likely arises from the catabolism of more complex lipid materials which are normal components of red and white blood cells. These cellular elements have a finite lifespan, and when they become senescent they are phagocytized and degraded by the reticuloendothelial system. The glucocerebroside which accumulates in the brain of patients with the infantile form of the disease is probably derived from other complex lipids called gangliosides (Cf. fig. 2, bottom 3 structures). Ganglioside metabolism in brain is very rapid in the neonatal period and thereafter gradually decreases to a comparatively very low rate. If patients with Gaucher's disease have sufficient residual glucocerebrosidase enzyme activity in the brain to handle the catabolism of gangliosides during the critical period of rapid ganglioside turnover they thereby escape brain damage and have normal development of their central nervous system. However, the difficulties in the peripheral tissues continue throughout life due to the constant erythro- and leukocytorrhexis.

The conclusive identification of the metabolic lesion in Gaucher's disease as a diminution of activity of a normally required hydrolytic enzyme was soon

## CONSTELLATION OF METABOLIC DISEASES CHARACTERIZED BY INABILITY TO DEGRADE SPHINGOLIPIDS

| Disease | Major sphingolipid accumulated | Enzyme defect |
|---|---|---|
| Gaucher |  <br>Ceramide glucoside (glucocerebroside) | β-Glucosidase |
| Niemann-Pick |  <br>Sphingomyelin | Sphingomyelinase |
| Krabbe |  <br>Ceramide galactoside (galactocerebroside) | β- Galactosidase |
| Metachromatic Leukodystophy |  Cer<br>β<br>Gal<br>OSO₃⁻<br>Ceramide galactose-3-sulfate (sulfatide) | Sulfatidase |
| Ceramide Lactoside Lipidosis |  Cer<br>β<br>Glc<br>β<br>Gal<br>Ceramide lactoside | β-Galactosidase |
| Fabry |  Cer<br>β<br>Glc<br>β<br>Gal<br>α<br>Gal<br>Ceramide trihexoside | α-Galactosidase |
| Tay-Sachs |  Cer<br>β<br>Glc<br>β<br>Gal<br>β<br>NAc Gal<br>NAcNA<br>Ganglioside GM₂ | Hexosaminidase A |
| Tay-Sachs Variant |  Cer<br>β<br>Glc<br>β<br>Gal<br>α<br>Gal<br>β<br>NAc Gal<br>Globoside (plus Ganglioside GM₂ ) | Total Hexosaminidase |
| Generalized Gangliosidosis |  Cer<br>β<br>Glc<br>β<br>Gal<br>β<br>NAc Gal<br>β<br>Gal<br>NAcNA<br>Ganglioside GM₁ | β-Galactosidase |

Cer = N-Acyl Sphingosine (Ceramide) Glc=Glucose PChol=Phosphorylcholine Gal=Galactose

NAcNA = N-Acetylneuraminic Acid NAcGal=N-Acetylgalactosamine followed by the demonstration of similar but discrete enzyme deficiencies in Niemann-Pick disease[7] and Fabry's disease.[8] Thus, the pattern of the metabolic defects in the lipid-storage diseases was established, and in time these discoveries led to the identification of the nature of the biochemical abnormalities in all of the 9 known sphingolipid storage diseases. The history of these developments has been amply documented in recent reviews.[9,10]

More to the point of the present discussion is the application of this information of which practicing physicians should now be aware. When an affected individual is identified it is now possible to perform tests to determine whether various members of the family are carriers of the disease in question.[11] Usually this examination involves only a simple venipuncture. The level of activity of the enzyme involved may be determined in washed leukocyte preparations or directly on aliquots of the individual's serum.[12] These tests must be carried out with great care because the level of activity of the enzymes in carriers usually ranges from 2/3 to 3/4 of that found in non-involved humans. Furthermore, as in all biological testing, there is quite a range of enzyme activity in controls, and considerable judgment may be required on the part of the clinical chemist to conclude with certainty that a heterozygous carrier has been accurately identified.

When 2 carriers marry, except of course in the case of Fabry's disease in which only the female need be a heterozygote to have an affected child, it is then wise to monitor ensuing pregnancies for an impending affected fetus. Pregnancy-testing for the lipid storage diseases may now be carried out with confidence.[13–16] Lipids labeled with radioactive carbon-14 or radioactive hydrogen-3 are necessary for monitoring pregnancies at risk for Niemann-Pick disease, Krabbe's disease, and the exceptionally rare condition called ceramide lactoside lipidosis. The detection of fetuses with the remaining 6 lipidoses now seem feasible through the use of artificial substrates. All 6 of the enzymes involved may be assayed spectrophotometrically or fluorometrically. Furthermore, the necessary 6 synthetic substrates are all available commercially. Therefore, pregnancy monitoring for Gaucher's disease, metachromatic leukodystrophy, Fabry's disease, Tay-Sachs disease, the variant form of Tay-Sachs disease, and generalized gangliosidosis will become increasingly available with the use of tissue-culture techniques and conventional clinical chemistry laboratory procedures.

I anticipate that the discoveries which have led to unraveling the nature of the biochemical defects in the lipid-storage diseases will lead to an ever broadening of our understanding of the underlying pathological chemistry of other conditions. Most of these problems appear extremely complex and subtle at this time, particularly, for example, patients with mental retardation in which early death does not invariably accompany the derangement. I think it is reasonable to expect considerable progress in the future in these conditions, especially when one considers retrospectively that a similar degree of perplexity surrounded the lipid-storage diseases only a few years ago. Furthermore, heterozygote detection procedures are being rapidly extended to other disorders. For example, a carrier detection test is now available for sickle-cell disease.[17] Unfortunately, at the present time prenatal identification of fetuses with sickle-cell disease is not feasible because the fetal cells which are obtained by amniocentesis arise from the fetal skin or mucous membrances rather then erythrocytes which are required for the hemoglobin analysis. Hopefully this detriment will soon be overcome, and herein lies a major challenge to obstetricians. Aminioscopy may eventually become a more widespread procedure with minimal operative risk. What is required is the development of a method to obtain a sample of fetal blood without danger to the fetus or the pregnant woman. If such fetal blood specimens can be obtained many additional tests can be performed on the erythrocytes, and the necessity for tissue culture will be obviated. With such a technique the time required for diagnostic testing for heritable metabolic diseases will be reduced from the present lag time of 3 to 4 weeks to a matter of hours.[12,18–21]

## Summary

The identification of heterozygous carriers of heritable metabolic diseases and the prenatal detection of fetuses afflicted with such conditions are becoming increasingly useful clinical procedures. These techniques have reached a high degree of refinement for the lipid-storage diseases. It is anticipated that the methodology developed in the course of these investigations will soon be extended to the management of other inherited disorders such as sickle-cell disease.

## References

1. JACOBSON, C. B. AND BARTER, R. H.: Amer. J. Obstet. Gynec., 1967, 99, 796.
2. MILUNSKY, A. AND OTHERS: New Eng. J. Med., 1970, 283, 1370.
3. DORFMAN, A. (ed.): Antenatal Diagnosis. Chicago: University of Chicago Press, in press.
4. TRAMS, E. G. AND BRADY, R. O.: J. Clin. Invest., 1960, 39, 1546.
5. BRADY, R. O., KANFER, J. N., AND SHAPIRO, D.: Biochem. Biophys. Res. Commun., 1965, 18, 221.

6. BRADY, R. O., KANFER, J. N., BRADLEY, R. M., AND SHAPIRO, D.: J. Clin. Invest., 1966, 45, 1112.
7. BRADY, R. O., KANFER, J. N., MOCK, M. B., AND FREDRICKSON, D. S.: Proc. Nat. Acad. Sci. U.S.A., 1966, 55, 366.
8. BRADY, R. O. AND OTHERS: New Eng. J. Med., 1967, 276, 1163.
9. BRADY, R. O.: Ann. Rev. Med., 1970, 21, 317.
10. BRADY, R. O.: Bull. N.Y. Acad. Med., 1971, 47, 173.
11. BRADY, R. O., JOHNSON, W. G., AND UHLENDORF, B. W.: Amer. J. Med., in press.
12. O'BRIEN, J. S., OKADA, S., CHEN, A., FILLERUP, D. L.: New Eng. J. Med., 1970, 283, 15.
13. BRADY, R. O.: Clin. Chem., 1970, 16, 811.
14. BRADY, R. O., UHLENDORF, B. W., AND JACOBSON, C. B.: Science, 1971, 172, 174.
15. EPSTEIN, C. J. AND OTHERS: Amer. J. Hum. Genet., in press.
16. O'BRIEN, J. S. AND OTHERS: Science, 1971, 172, 61.
17. NALBANDIAN, R. M. AND OTHERS: Clin. Chem., 1970, 16, 945.
18. KAMPINE, J. P. AND OTHERS: Science, 1967, 155, 86.
19. PERCY, A. K. AND BRADY, R. O.: Science, 1968, 161, 594.
20. KINT, J. A.: Science, 1970, 167, 1268.
21. SUZUKI, Y. AND SUZUKI, K.: Science, 1971, 171, 73.

SUPPORT YOUR MENTAL HEALTH ASSOCIATION

# Emergency Treatment of Drug Abusers*

RICHARD PHILLIPSON, M.D.

DURING THE PAST YEARS drug abuse has become a major public health problem in the United States. It is today the leading cause of death between the ages of 15 and 35 in New York City, where it is known that in the 10 years ending December 1968, 3500 persons died as a direct result of narcotic addiction. There was a marked increase in deaths during recent years to 950 in 1969, and a decrease in the average age at death to 26 years. This paper describes emergency treatment for acute poisoning with narcotics, barbiturates, amphetamines, and hallucinogens.

## The Narcotics

*Acute Intoxication.* Heroin is the narcotic most frequently abused. Opium, morphine, codeine and the synthetic narcotics, e.g., methadone produce similar clinical states in overdosage. The patient who has taken an overdose is comatose, with pinpoint pupils and depressed vital signs. If he is an addict, 'tracks' along the course of the superficial veins or fresh needle marks will be seen. Thrombophlebitis or evidence of healed skin abscesses may be detectable. A search of his clothing may reveal the "works" or capsules of glassine wrapped powder which should be analyzed to help clarify the diagnosis.

Support of the vital functions requires management for shock. The markedly depressed respiratory rate will sometimes necessitate manual or mechanical artificial respiration.

Nalorphine (Nalline) is an anti-narcotic which reverses the effects of heroin toxicity. It produces a rapid recovery with awakening, but it is short-acting, and the patient may revert into apnea, hypotension, and bradycardia. A narcotic antagonist must be given until the patient's condition has stabilized over a 12-hour period. Since methadone is longer acting than heroin, a patient in methadone overdose must be watched for relapse for 24-48 hours because fatalites have occurred when caution was relaxed after 24 hours.

*Withdrawal syndrome.* Another complication of heroin addiction is the abstinence syndrome. Many addicts have heroin 'habits' which produce few symptoms on withdrawal, and their complaints may result from their anxiety or a bid for additional medication. Some addicts have become tolerant to large amounts of heroin and require gradual reduction in narcotic dosage to diminish the severity of the withdrawal symptoms.

The withdrawal syndrome develops about 8-12 hours after the last dose. Restlessness, yawning, gooseflesh, perspiration, tearing, and a runny nose are early symptoms. The pupils are now dilated and poorly reactive to light. Muscular aches and twitches, chills and fever, anorexia, nausea, vomiting and diarrhea occur in the person who has suddenly stopped a substantial 'habit.' These latter symptoms are reminiscent of a severe case of influenza. The 'yen sleep' occurs after a day of abstinence. It is often associated with nightmares and muscle spasms.

In the full-blown, untreated abstinence situation the pulse rate, temperature, respirations and blood pressure are all increased. Dehydration, weight-loss from vomiting and poor fluid intake, and a toxic delirium are present. The patient may be first seen lying in a foetal position in his excreta.

Methadone 10-20 mg orally given to a total of 40-60 mg daily is the drug of choice because of its prolonged action. It is to be expected that the addict will feign symptoms or demand additional drugs. Each day the dose is reduced by 5-10 mg, and at the end of a week the patient is relatively comfortable without narcotics. Additional sleeping medication may be required. The non-addictive phenothiazines are preferred for this purpose.

Some heroin addicts also have developed a tolerance to barbiturates because they were used to enhance the heroin effect. Concomittant barbiturate withdrawal would then be necessary.

## The Barbiturates

*Acute intoxication.* Acute barbiturate intoxication resembles acute alcoholic intoxication. The face is flushed, respiratory rate decreased and tendon reflexes are depressed, ataxia, dysarthria, and poor motor coördination and mental confusion frequently appear. Coma and autonomic depression accompany severe overdose. The treatment consists of support of cardiovascular and respiratory functions. Gastric or intraperitoneal lavage or hemodialysis may be required. Antibiotics, oxygen, and intravenous fluids are ordinarily required. Of considerable importance is maintainance of the airway. Central stimulants can be considered only an adjunctive treatment.

---

* From the National Institute of Mental Health 5600 Fishers Lane, Rockville, Maryland 20852.

*Withdrawal syndrome.* The barbiturate abstinence syndrome is more life-endangering than the opiate withdrawal syndrome. Chronic use of 500 mg or less of the moderately rapid acting barbiturates may only result in shakiness, anxiety, muscular irritability, orthostatic tachycardia, and insomnia. When the patient has become tolerant to much larger amounts of barbiturates late grand mal convulsions, a delayed toxic psychosis, hyperpyrexia, and coarse muscle tremors may occur. Death may ensue from cardiovascular collapse.

Gradual reduction of dosage with the use of secobarbital or pentobarbital is preferable to the risks of abrupt stoppage of a chronic, large barbiturate intake. When the daily dosage cannot be accurately ascertained a test dose of 200 mg of pentobarbital is given orally. If the patient is drowsy, ataxic, and has a slurred speech 2 hours later, he has had a mild addiction. Nystagmus noted after a 200 mg dose confirms the impression that less than 500 mg of barbiturates were used. When no signs of intoxication occur, an additional 200 mg is administered every 2 hours until mild symptoms of intoxication appear. The amount of 200 mg doses required is multiplied by 1.5 to obtain the 24-hour requirement of pentobarbital. This should be given in divided doses every 4 hours. Thereafter the daily dose is reduced by 100 mg, 10-14 days being allowed for complete withdrawal. Dilantin is unnecessary as a prophylactic for seizures but should be given if the patient is an epileptic. As the detoxification procedure approaches termination, phenobarbital can be substituted for the equivalent amount of pentobarbital.

## The Amphetamines

*Acute intoxication.* Individuals intolerant to amphetamines manifest irritability, insomnia, hyperactivity, and a hypomaniacal flood of thoughts on single high doses. The pupils are dilated, tendon reflexes quickened, and blood pressure and heart rate increased. Confusion and irrational behavior have been observed. The central stimulant effects include dry mouth, sweating, shallow respirations, and circulatory collapse. A very high temperature, convulsions, and coma are terminal signs. As little as 100-200 mg of dextroamphetamine has been known to cause death.

The treatment is supportive of the vital functions, with barbiturates or phenothiazines being the most commonly used chemical sedatives.

*Withdrawal syndrome.* Tolerance to amphetamines may occur despite earlier assumptions in textbooks to the contrary. Eventually, hundreds of times the average dose of amphetamines can be tolerated whether ingested or injected intravenously. Tolerance for the hypertensive, cardioregulatory, pupillary, and other sympathomimetic effects may be complete. Methamphetamines happen to be the preferred stimulant in this country. They produce an intense 'high' on initial injection; as the effects wane, ingestion is repeated. 'Speed runs' of days or weeks are known with gradual buildup of dosage. These are characterized by stereotyped activities, irritability, impulsivity, and aggressive behavior. Paranoid suspiciousness is almost invariable. Accidental death or homicidal acts are possible during a 'speed' binge. Eventually, tolerance to the euphoriant effect occurs, or the individual stops ('crashes') because he has run out of supplies. The central stimulant withdrawal syndrome is characterized by a prolonged sleep, ravenous eating after awakening, and an intense, apathetic depression. Paranoid thinking may continue after the drug has been stopped. The administration of amphetamines will abolish the depression, lethargy, and muscle aches.

The treatment of the withdrawal syndrome may require minimal intervention. It is not a life-endangering situation except for the possibility of suicide. Tricyclic antidepressants may be useful. Addiction to high doses of amphetamines is a relapsing illness. The prevention of recurrent 'speed runs' may require hospitalization and psychiatric care.

Most commerical laboratories are capable of identifying amphetamines, barbiturates, opiates and cocaine in the urine of patients suspected of being acutely or chronically intoxicated. LSD and cannabis cannot be detected in commerical laboratories at this time.

## The Hallucinogens

The hallucingoens include LSD, mescaline, DMT, STP, THC, (tetrahydrocannabinal) cannabis, psilocybin, certain species of the American morning glory seed, and related compounds. The identity of the black market material is qualitatively and quantitatively very variable. For example, no material sold as THC has yet been found to contain THC. Instead, the contents are LSD or phencyclidine (Serny!). Similarly, mescaline and psilocybin turn out on analysis to be various amounts of LSD or STP. Strychnine, amphetamines and atropine have been found as some of the adulterants in material sold as LSD. In addition to the counterfeits and impurities, the patient may not have any idea what he had ingested. Not infrequently combinations of substances are taken together, thus making diagnosis and treatment a complicated matter.

*Acute intoxication.* Behavioral toxicity is the prime indication for medical intervention. During the period of the activity of hallucinogens, marked anxiety or panic states can produce hazardous behavior. Occasionally delusions of grandeur may be acted upon. Such behavior can lead to injury to the patient or those around him. He may be brought into the treatment situation agitated, fearful, confused, and incoherent.

If possible, the attention of the patient should be secured and held. The hallucinogens induce a hypersuggestible state and this should be treated by reassurance, and urging him to relax and remain calm. Assurance that the distortions are temporary, and supportive, sincere statements that he will be protected and cared for, may be sufficient to 'talk him down.' It is preferable for the patient to keep his eyes open, because this reduces the intensity of the reaction. Physical restraints are undesirable, but assistance should be nearby in case an attempt is made to run away.

If hyperactivity cannot be brought under control, chemical sedation may be necessary. Although the phenothiazines (chlorpromazine 25-100 mg IM) are physiologic antidotes to LSD, the possibility that some anticholinergic adulterant may have been taken makes these drugs less desirable. The barbiturates (sodium secobarbital or sodium pentobarbital 250-500 mg IM or IV) should produce relaxation and sleep. Chlordiazepoxide 50 mg or diazepzm 10 mg IM or IV are preferred by some physicians.

The most common cause of death is by accident due to panicky behavior or the acting out of delusional ideas of omnipotence. Suicides have been known to occur during or immediately following the hallucinogenic experience. Homicides are very rarely encountered.

*Chronic complications.* The prolonged anxiety or psychotic states which may follow an hallucinogenic experience of a 'flashback' are treated just as those not precipitated by hallucinogens. The 'flashback' or recurrence of an LSD-like state without having taken the drug may be a transient event. If it persists or is recurrent, the presenting symptoms, usually anxiety, are treated. The anxiety reactions tend to remit. The psychotic states ordinarily do well, but occasionally some patients will not improve despite intensive psychotherapy and/or chemotherapy. If little or no progress can be detected over many months or years, consideration must be given to a series of electroconvulsive treatments. Remissions have occurred after a few of these.

## Supplementary References

BADEN, M.: Medical Aspects of Drug Abuse. New York Med., 1968, 24, 464.

CHERUBIN, C.: The Medical Sequelae of Narcotic Addiction. Ann Intern. Med., 1967, 67, 23.

FREEDMAN, A. M., AND KAPLAN, H. I.: Comprehensive Textbook of Psychiatry. Baltimore: Williams and Wilkins, 1968.

LOURIA, D. B., HENSLE, T., ROSE, J.: The Major Medical Complications of Heroin Addiction. Ann. Intern. Med., 1967, 67, 1.

# The Outlook for Prevention of Dental Caries

HENRY W. SCHERP, Ph.D.*

DURING THE PAST DECADE research on dental caries has experienced an impressive resurgence on a broad front, catalyzed primarily by experimental substantiation of the concept that caries results from 1 or more transmissible infections. Specifically, caries results from colonization of vulnerable surfaces of the teeth by a characteristic group of bacteria, harbored by many members of a susceptible host species and transmitted from them to previously uninfected members of the same species. These bacteria ferment dietary carbohydrates *in situ*, principally to lactic acid, which, at susceptible sites, initiates the carious lesion by demineralizing the enamel surface. In particular, the predominant group of cariogenic bacteria identified until now can metabolize sucrose in a peculiar way, producing extracellularly an adhesive polysaccharide (dextran) from the glucose moiety, and mainly lactic acid from the fructose moiety. Typically, these bacteria also store intracellular polysaccharide (amylopectin) during periods of environmental carbohydrate abundance, and utilize it with the formation of lactic acid during periods of environmental carbohydrate deficiency. The development of caries requires critical relationships between tooth surface, oral microbiota, and dietary carbohydrate. The logical approach to control, therefore, is to modify 1 or more of the 3 factors in this host-parasite-environment complex.

Review of the caries research accomplished warrants expectation that we could greatly speed reduction of the deplorably high continuing prevalence of dental caries by a concerted effort to apply existing knowledge, to develop established leads, and to foster the fundamental research judged most likely to produce utilizable new information. To this end the National Institute of Dental Research has embarked on a National Caries Program, guided by an advisory committee of leading scientists representing various phases of caries research and drawn from both within and without the Institute.

Appropriately, the program emphasizes prevention rather than repair or cure, for there are no clearly evident therapeutic leads that promise to do more at best than arrest a carious lesion once it is clinically detectable.

This brief review emphasizes those areas where action seems most likely to benefit the most people promptly. For guidance, I have considered 3 questions: What measures of proved efficacy are being used inadequately? What measures have been sufficiently proved by preliminary clinical trials to warrant large-scale field demonstration or national application? What fundamental research is ready for intensive development and clinical trial? The currently most likely answers follow, as they concern, respectively, protecting the teeth, modifying the diet, and controlling cariogenic bacteria.

## Protecting the Teeth

Adequate incorporation of fluoride in teeth, particularly in the outer layers of the enamel, remains the only thoroughly proved means to increase resistance of teeth to caries. The experience of 25 years leaves no doubt that a daily intake throughout life of about 1 mg of fluoride per person, as commonly provided by from 0.7 to 1.0 ppm (part per million) of fluoride in public water supplies, harmlessly lowers the caries rate by from 50 to 60% in permanent teeth and slightly less in deciduous teeth, under present conditions in the United States.

Logically, a national program to prevent caries should be based on universal fluoridation at this level. Yet in 1967 only 52.8% of our population using public water supplies received this benefit, 46.3% by controlled artificial fluoridation and 6.5% by natural fluoridation. Furthermore, 22% of the total U. S. population, or 44,000,000 persons, do not have access to public water systems, though presumably many ingest naturally fluoridated water and some receive controlled amounts of fluoride by other means. Clearly a major effort is still needed to fluoridate more communal water supplies and by alternate means to get fluoride to the large fraction of our population not thus accessible. The latter group could be reached by controlled fluoridation of water supplies at central schools in rural areas; via the diet, as by addition of fluoride to salt, sugar, flour, milk or other widely consumed foodstuff; by direct ingestion of fluoride tablets or solutions; or by do-it-yourself topical application of fluoride, whether in dentifrices or in aqueous solutions. Essentially, this seems to be a problem of public health administration.

---

* Special Assistant to Director for National Caries Program, National Institute of Dental Research, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20014.

What about the enormous number of carious lesions that develop despite fluoridation? Are we recommending a sufficient dosage of fluoride? The thorough epidemiological studies of the past indicated that more than 1 ppm of fluoride in the water supply did not confer much additional protection against caries in permanent teeth. Some investigators, however, have recommended 2 ppm as more beneficial for deciduous teeth, though at some risk of slight fluorosis in permanent teeth. Alternatively, the fluoride content of enamel can be increased by topical application, with practically no risk of fluorosis. Recent studies indicate that intensive topical application of fluoride to increase the fluoride content of the outer few microns of enamel to 2 or 3 times the average level acquired from fluoridated water, can reduce caries by as much as 75 to 80%, that is, half again as much reduction as effected by controlled fluoridation of water supplies. Furthermore, the anticaries effect and the elevated fluoride content of the enamel persist for at least 23 months without additional topical application and without fluoridated water. By using a slightly acid phosphate-fluoride solution and pre-treating the teeth with cations such as aluminum or titanium, which complex strongly with fluoride ion, it might be possible to reduce greatly the number of applications needed to achieve the desired levels of enamel fluoride.

Caries that develops despite optimum fluoridation of teeth occurs principally in the pits and fissures of the occlusal surfaces of the molars and bicuspids. This vulnerability is usually attributed to impaction of food residues and bacteria plus thinness of the enamel in these areas, at least in newly erupted teeth; with age, the enamel thickens and the susceptibility to caries lessens. On the other hand, it was shown in the 1920's that pit-and-fissure areas could be protected against caries either by drilling them out to form wide nonretentive grooves or by preparing them like cavities and then filling them with dental amalgam. No matter how effective, these procedures obviously were not destined to gain wide popularity. Now the same result can be accomplished by sealing the occlusal surfaces with a newly developed adhesive polymer. Sites treated but once with this sealant have remained almost completely caries-free for 2 years, the duration of tests to date, whereas nearly half of contralateral untreated sites in the same mouths developed carious lesions.

This simple, rapid, painless procedure can be carried out entirely by properly instructed and supervised dental auxiliaries. Optimally, occlusal surfaces should be sealed soon after eruption of the tooth, to protect them during their most caries-susceptible period, the next several years at least. It will be important to ascertain whether such early sealing impedes the previously mentioned normal maturation and development of resistance to caries, thereby possibly leaving the pits and fissures indefinitely susceptible to caries, if uncovered. Even if so, routine inspection and re-application of sealant, if necessary, could compensate for this limitation. Application of this measure on a public health scale would, of course, have to overcome an enormous manpower problem, quite likely necessitating a great increase in auxiliary dental personnel.

## Modifying the Diet

An abundance of epidemiological and experimental evidence indicates that sucrose is a particularly cariogenic culprit in our modern diet. So far as we know this unfortunate property relates to the peculiar way in which sucrose can be metabolized by cariogenic streptococci, as mentioned previously; admittedly, much more investigation of this point is needed. Whatever the mechanism, if we got practically all of our carbohydrate from starchy foods, and if we were adequately fluoridated, caries on the crowns of the teeth would almost certainly be negligible. Such is the case in regions of Southeast Asia, for example. Though the number of subjects is necessarily small, data on persons suffering from hereditary fructose intolerance point to the same conclusion. These persons are deficient in the liver aldolase that splits fructose-1-phosphate, an essential step in human fructose metabolism. They become violently ill if they ingest more than very small amounts of sucrose or other foodstuffs containing fructose, such as honey, fruits, or fruit juices. Consequently, they tend to avoid sweetstuffs of all kinds and consume starchy foods instead. They experience little or no caries.

There are no data as to whether replacement of dietary sucrose by other sugars would reduce human caries as effectively as replacement by starch. In experimental caries of hamsters and rats, however, glucose or fructose, or an equimolar mixture of the 2 have induced much less caries than sucrose. Comparisons between these studies are very difficult because of differences in strains of animal, consistency and composition of diets, methods of scoring caries, and measures to ensure the presence of cariogenic bacteria. The reductions in caries activity have been most pronounced on smooth surfaces of teeth, where development of caries seems to depend on *Streptococcus mutans* and its adhesion by extracellular dextran produced from sucrose. In the hamster all caries is of this type because of the morphology of the teeth. In the deep fissures of the rat molars, on the other hand, food impaction makes adhesion unnecessary, and indigenous acidogens, as well as *S. mutans*, can initiate caries if provided with various fermentable sugars, such as glucose, fructose, maltose, or sucrose. Substitution of starch for sugars, however, consistently reduces the caries scores to very low levels.

Replacement of sucrose in our diet would require quite a cultural and technological revolution, but might not be as impractical as it seems. Trials with candies made with a hydrogenated starch hydrolyzate have been made in Sweden. Even if sucrose could be replaced by other sweets in candy or other between-meal snacks alone, the result might be quite beneficial, judging by animal studies and epidemiological data. Merely reducing the frequency of eating a high-sucrose diet significantly reduces caries in rats. In humans, increased frequency of between-meal eating of sugary snacks correlates with increased caries. Furthermore, *in vitro* at concentrations of sucrose below 0.5% *Streptococcus mutans* makes very little dextran; at high concentrations up to 10%, dextran production increases proportionally to sucrose concentration. These facts indicate the importance of keeping the intraoral accumulation of sucrose as low as possible, whether by reducing the frequency of intake, avoiding adherent sweetstuffs, or diluting the sucrose in sweetstuffs with other sweeteners. The considerations in this paragraph are of course predicated on the assumption that in human diets other sugars would be less cariogenic than sucrose.

If it is not practicable to replace sucrose in our diet, can anything be added to the diet to mitigate its cariogenicity? Phosphates are a possible answer. More than 150 laboratory studies agree that addition of any of a wide variety of inorganic and organic phosphates to high-sucrose and other cariogenic diets significantly reduces caries in rats and hamsters, in some experiments almost completely. On average, the phosphorus content of the diet must be doubled to get a significent caries reduction. So far, the cyclic condensed salt, sodium trimetaphosphate, has been the most effective one. Unfortunately, the relatively few clinical trials reported so far do not tell us unequivocally whether or not a phosphate dietary supplement can reduce caries in humans. Translating the conditions of the animal models into a regimen suitable for delivering adequate extra phosphate to humans presents many complexities. Conceivably it might be helpful if a phosphate were incorporated in sweetened between-meal snacks alone.

Thirty years ago epidemiologists of the U. S. Public Health Service were struck by the wide variations in caries incidence between different localities. These differences were greatest between low-fluoride areas, but they were discernible between high-fluoride areas also. It was suggested that caries resistance might be attributable not only to the fluoride content of drinking water but also to other trace elements or to unusually high concentrations of ordinary constituents of the water. Only recently, however, has this experiment of nature begun to receive the epidemiological and laboratory study that it merits. One study indicates a correlation between low caries experience and increased concentrations of boron, lithium, molybdenum, strontium, and vanadium in the drinking water. Except for fluoride, however, available data indicate that from 80 to 99% of our trace element intake comes from foodstuffs. Consequently, attention to the mineral content of water alone might mislead us. Another study emphasizes the "alkaline earth" factor—the content of strontium, calcium, barium, magnesium, manganese, lithium, and potassium, and to a lesser degree zirconium and boron in the soil. Though it is clearly premature to consider controlled administration of such elements to humans, if these correlations can be validated and shown to signify a causal relation, an anticaries measure as potent as controlled fluoridation should eventuate.

### Controlling Cariogenic Bacteria

A comprehensive program for preventing caries logically should include measures to reduce colonization of the teeth by cariogenic bacteria or to suppress their activities, as by topical application of antibacterial agents, metabolic regulators to inhibit production of cariogenic products, or enzymes to digest products conducing to adhesion of bacteria to teeth, and immunological measures. Paradoxically, while strong emphasis has been given to increasing the resistance of teeth to caries and to reducing the cariogenicity of the diet, proportionately little attention has been given to antimicrobial measures, possibly because until recently evidence was lacking for specific microbial agents in caries.

Various studies have shown that pure cultures of quite a few species of streptococci, some lactobacilli, and at least 1 diphtheroidal-filamentous species conduce to caries in experimental animals when implanted in the oral cavity in conjunction with diets high in sugar. Of the species tested so far in a number of laboratories, strains of *Streptococcus mutans* have been the most regularly cariogenic and on the whole have produced the most extensive lesions, particularly on coronal smooth surfaces. Other, admittedly circumstantial evidence that *S. mutans* is an etiological factor in human caries seems quite convincing to me.

Present evidence indicates that the greater cariogenicity of *S. mutans*, compared with a variety of other oral acidogens, relates to its characteristic of producing from sucrose so-called insoluble dextrans of high molecular weight. These dextrans presumably conduce to greater adhesiveness of *S. mutans* to the tooth surface. Accordingly, a measure that decomposes dextran or impedes its synthesis should prevent caries. Thus, incorporation of a dextranase preparation in the diet and drinking water, or in the water alone, dramatically reduces both plaque accumulation and caries in hamsters on a high-sucrose diet. Similar experiments in rats give less impressive results, particularly in caries of the molar fissures, where presumably the production of dextran and adherence of plaque are not essential and mechanical retention of cariogenic diet and bacteria suffices to induce caries.

Use of a dextranase solution as a mouthwash can eliminate the dextranous portion of human dental plaque, although the gross diminution of the accumulation is not noteworthy—not a surprising result, considering that human dental plaque, unlike that in the hamster, is only partially composed of *S. mutans* and its dextran. I believe the total background data justify clinical trials to determine whether topical applications of dextranase can reduce the caries increment. Such trials should serve also to test the hypothesis that *S. mutans* is cariogenic in man.

Incorporation of a dextran of low molecular weight in a high-sucrose diet lowers the caries rate in hamsters, presumably because it blocks combining sites on the enzyme dextransucrase and prevents synthesis of dextran of high molecular weight. To reduce the caries score by more than 50%, however, requires from 6 to 16% dextran in the diet—levels that might preclude analogous regimens for humans. As with phosphates, it might be beneficial to incorporate low molecular-weight dextran in sucrose-containing between-meal snacks alone.

For more than 20 years we have known that certain antibiotics can reduce the incidence of caries in rats, hamsters, and humans. Yet there has been a strange reluctance to exploit this promising lead—possibly because the microbial target was not well enough defined, possibly because of undue concern about deleterious changes in the oral microbiota, and possibly because of unfavorable effects of certain antibiotics, such as tetracyclines, on the teeth. Now the target is more nearly defined, and bacteriological studies indicate that long-term administration of penicillin, for example, does not alter the oral flora harmfully. Surely a vigorous program to develop rational use of antibiotics or other antimicrobial agents in oral hygiene is long overdue. Though antibiotics seem to be paramount in people's thinking these days, it would be seriously shortsighted not to explore the potentialities of the myriad man-made antibacterial chemicals available. Indeed, some investigators maintain that the latter have a theoretical advantage. Since their antimicrobial spectrum is generally not very specific, they could be expected to hold the oral biota in check overall and thereby entail less risk of altering its normal balance deleteriously.

Naturally one does not propose indiscriminate dosing. Nor need we strive for a germfree mouth (not a realistic goal anyway), for much evidence indicates that a partial or selective reduction of plaque-forming oral bacteria would go far to reduce caries (and incidentally, periodontal disease). The following criteria have been proposed to guide the selection of antimicrobial agents for topical application to prevent caries. The agents should be effective against presumptively cariogenic streptococci and lactobacilli, and therefore as a rule would inhibit a variety of other gram-positive bacteria; efficacy against gram-negative bacteria, yeasts, and protozoa would be advantageous but seems not to be essential. Drug-resistant mutants should occur rarely, if at all. It would be very desirable to select agents unlikely to be administered orally or parenterally for systemic diseases. Accordingly, they should not be absorbable through the oral mucosa or from the gastrointestinal tract. Preferably they should be destroyed in the stomach or intestine in order to reduce the chance of altering the intestinal flora. They should be palatable, harmless to oral mucosa and teeth, and nonallergenic. They should have a long shelf-life, particularly in solution. Observance of these criteria should overcome the sort of opposition that has met proposals for intraoral use of some of the more popular antibiotics. A few tests meeting these criteria are in progress, but the field is still wide open.

Widespread anticipation of a caries vaccine persists, despite the lack of a basis in fundamental knowledge to justify it. Admittedly, immunological prevention of caries does seem very unlikely, whether by antibodies to cellular antigens of cariogenic bacteria or by antibodies to such presumably caries-conducive bacterial products as dextran-sucrase. Indeed, an immunologist can easily develop *a priori* a convincing argument showing why the immunological approach to caries prevention could not possibly succeed. We would do well to remind ourselves of the pitfalls in such *a priori* reasoning. However unpromising the outlook for eventual payoff may seem, I would encourage continuation of pertinent fundamental investigations, such as identification of cariogenic bacteria and their serological grouping; immunochemical analysis of their cell-wall antigens and extracellular products; local antibody formation in regional lymph nodes, other oral lymphoid tissues, and salivary glands; consequences of local administration of antigens; possible protective functions of salivary IgA, the predominant immunoglobulin of saliva; and eventually, more exactly aimed attempts to immunize experimental animals against caries.

This necessarily abbreviated analysis aims only to indicate the currently most promising ways to prevent dental caries. No doubt future research will discover important new leads to this end; I hope this discussion will help to stimulate such research. Very probably, no one measure will suffice to control caries, but I believe we can be confident that some combination of available and imminent measures could do so. Probably the greatest, and most ignored, need is to organize means and to motivate people to apply adequately what we already know and what we expect to discover.

# President's Page

## MAY DAY - 1971

Although massive protest marches should be "old hat" to the city of Washington and its various support services, medical management has continued to vary from one occasion to the next. Many of the cities' physicians have expressed concern about the way emergency medical services were handled during the recent demonstrations held in May. Many reports were received indicating the valiant service rendered by members of the medical establishment. On the other hand, other reports suggested a rather callous disregard for medical immunity by members of those attempting to keep order.

Major emergency medical facilities for the District of Columbia have been the responsibility of the City Health Department with assistance from the Public Health Service. In addition, the Medical Community for Human Rights, both locally and from afar, participate in offering their medical and paramedical assistance. As in any major confrontation, mistakes are apt to be made in the planning phase as well as in frank execution. In the recent demonstrations the role of the physician and paramedical support was not clearly enough outlined so that it was understood by all who wished to volunteer.

Because it is sometimes difficult to separate fact from fiction, I have asked that certain positive steps be taken. Under the leadership of Dr. Harry Zehner, Jr., special meetings have been held of the Medical Society's Emergency Medical Committee. On May 24, 1971 a preliminary meeting was held at the Medical Society to outline the basic problems, to set up a means to avoid misunderstandings in the future, and to provide better medical attention for any new occasion that might arise. Subsequently, a larger meeting was held on June 9, 1971 which was attended by representatives of the health, police and government establishments.

As a result of these meetings a new set of guidelines were drawn up for all those interested in offering emergency medical services. These guidelines enable greater participation by individual members of the Medical Society if they so desire, and at the same time protect all medical and paramedical personnel during the performance of their duty. The responsibilities of the various members of the health establishment have been more clearly delineated. Also, these guidelines should prevent immunity to those individuals wearing Red Cross patches - acting as the provocateur.

For whatever else the May Day demonstrations did or did not do, one by-product now stands clearly in focus - It has helped to coalesce the health delivery services of this community. As a result there is a much greater understanding between all participants and a greater chance for cooperation in the future.

Marvin C Korengold

## CAMPBELL'S SOUPS IN DIABETIC DIETS*

### RECOMMENDATIONS FOR PLACING CAMPBELL'S SOUPS* INTO EXCHANGE LISTS

* These recommendations are based on a *one cup portion* when prepared according to directions on the label. If milk is used in the preparation, use part of your daily requirement.

**Exchange Substitution for 1 Bread and ½ Fat**
Tomato
Tomato, Bisque of
Tomato Rice, Old Fashioned

**Exchange Substitution for ½ Bread and ½ Fat**
Asparagus, Cream of

**Exchange Substitution for 1 Meat and 1½ Bread**
Hot Dog Bean
Split Pea with Ham

**Exchange Substitution for ¼ Meat and ½ Bread**
Chicken Gumbo
Chicken Noodle

Campbell's Soups are appetizing and enjoyable and, because of the many varieties available, offer your diabetic patients the opportunity to plan and enjoy more interesting and appealing meals.

*To obtain copies of "Recommendations for Placing Campbell's Soups Into Exchange Lists," suitable for distribution to patients, write to Campbell Soup Company, Dept. 500, Campbell Place, Camden, N.J. 08101.

here's a soup
for almost every patient and diet
.for every meal
and, it's made by Campbell

An excerpt from the Searle series "The Ecology of Birth Control"*
N
The Unwanted Child & Birth Control

## Ten thousand battered children–a growing medical problem?

In his daily practice the physician witnesses the human suffering caused by uncontrolled fertility. Perhaps one of its most tragic effects is the unwanted child, who so often experiences parental rejection. The rejected child in a family may be neglected, nagged and severely punished. Sometimes he is criminally abused. Child abuse is common enough to have become a separate clinical entity: the "battered child" syndrome. Reliable statistics are difficult to obtain, but it has been estimated that in this country alone roughly 10,000 children are "battered" per year, and their number may be increasing.

A revealing picture of child abuse patterns is provided by one study of the American Humane Society. More than half of the 662 children involved (all reported in newspapers within a single year) were less than 4 years of age. One fourth of the battered youngsters died; most of these deaths were of children less than 2 years of age. Fathers were more often guilty of child abuse than mothers, but sometimes both parents participated. The study indicated that battered children are not limited to any particular socioeconomic stratum.

***For the complete brochure, and others in the serie as they appear, please write to Searle or ask your Searle representative.** Explored in the forthcoming issues will be the history of birth control, the influenc of poverty, ethnic factors and marital status, its role in illness, its genetic implications and its effects on the emotional and behavioral life of the individual.

# Original contributions
# to the science of contraception

## BOTH AVAILABLE IN 21- AND 28-PILL SCHEDULES

# Ovulen® · Demulen®

ach white tablet contains: ethynodiol
iacetate 1 mg./mestranol 0.1 mg

Each white tablet contains: ethynodiol
diacetate 1 mg./ethinyl estradiol 50 mcg

ach pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients

emulen...for its low estrogen and Searle's progestin—or Ovulen...with its wide physician nd patient acceptance. Both offer almost complete contraceptive effectiveness and a w incidence of side effects. Both with a choice of pill-taking schedules...simple Sunday-starting" and patient-proof Compack® tablet dispensers.

**Actions** – Ovulen and Demulen act to prevent ovulation by inhibiting the output gonadotropins from the pituitary gland Ovulen and Demulen depress the out- ut of both the follicle-stimulating hormone (FSH) and the luteinizing rmone (LH).

**Special note** – Oral contraceptives have been marketed in the United States ice 1960. Reported pregnancy rates vary from product to product. The effec- eness of the sequential products appears to be somewhat lower than that of combination products Both types provide almost completely effective con- ception

An increased risk of thromboembolic disease associated with the use of hor- nal contraceptives has now been shown in studies conducted in both Great itain and the United States. Other risks, such as those of elevated blood essure, liver disease and reduced tolerance to carbohydrates, have not been antitated with precision.

Long-term administration of both natural and synthetic estrogens in subpri- ate animal species in multiples of the human dose increases the frequency of me animal carcinomas. These data cannot be transposed directly to man. e possible carcinogenicity due to the estrogens can be neither affirmed nor uted at this time. Close clinical surveillance of all women taking oral contra- ptives must be continued

**Indication** – Ovulen and Demulen are indicated for oral contraception.

**Contraindications** – Patients with thrombophlebitis, thromboembolic disor- rs, cerebral apoplexy or a past history of these conditions, markedly impaired r function, known or suspected carcinoma of the breast, known or suspected rogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings** – The physician should be alert to the earliest manifestations of ombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary bolism and retinal thrombosis). Should any of these occur or be suspected drug should be discontinued immediately.

etrospective studies of morbidity and mortality conducted in Great Britain and dies of morbidity in the United States have shown a statistically significant ociation between thrombophlebitis, pulmonary embolism, and cere- l thrombosis and embolism and the use of oral contraceptives. There have n three principal studies in Britain[1-3] leading to this conclusion, and one[4] in s country The estimate of the relative risk of thromboembolism in the study by ssey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United tes found a relative risk of 4 4, meaning that the users are several times as likely undergo thromboembolic disease without evident cause as nonusers. The nerican study also indicated that the risk did not persist after discontinuation of ministration, and that it was not enhanced by long-continued administration. e American study was not designed to evaluate a difference between products. wever, the study suggested that there might be an increased risk of throm- embolic disease in users of sequential products. This risk cannot be quanti- ed, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or com- te loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. xamination reveals papilledema or retinal vascular lesions medication should withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demon- ated, it is recommended that for any patient who has missed two consecutive iods pregnancy should be ruled out before continuing the contraceptive regi- n. If the patient has not adhered to the prescribed schedule the possibility of gnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identi- d in the milk of mothers receiving these drugs. The long-range effect to the nurs- infant cannot be determined at this time

**Precautions** – The pretreatment and periodic physical examinations should lude special reference to the breasts and pelvic organs, including a Papani- aou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives** – A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in $T^3$ uptake values; metyrapone test and pregnanediol determination.

**References: 1.** Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

1A5

SEARLE Where "The Pill" Began
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

# Mylanta®
# 24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

**Mylanta®**
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

# This "case history" runs to some 10,000 pages

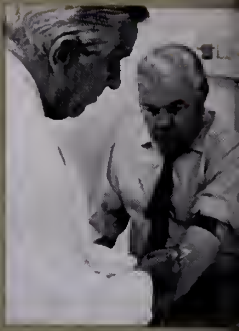
This is a typical "case history" of one new drug—or, rather, a proposed new drug—assembled for submission to the U.S. Federal Food and Drug Administration. These volumes are the result of several years' work by thousands of professional and skilled personnel in just one pharmaceutical company's research laboratories, and by hundreds of physicians in medical schools, hospitals, and private practice. They cover every aspect of experience with this proposed new agent from chemical laboratory to clinic, from mouse to man. Each volume could conceivably represent hundreds of thousands of dollars of financial investment, countless hours of human effort. This veritable mountain of data stands behind every new agent offered to you by pharmaceutical manufacturers—a reassuring testimonial to the efficacy, safety and purity of the drugs you will prescribe today to lower the cost of disease to your patients.

**Pharmaceutical
Manufacturers Association
Pharmaceutical
Advertising Council**

1155 Fifteenth St., N. W., Washington, D.C. 20005

This message is brought to you as a courtesy of this publication on behalf of the producers of prescription drugs.

*in stable adult diabetes, if diet alone fails...*



# start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

---

## *A Distinctive Oral Hypoglycemic*

---

## a biguanide... not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

# DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

# lowers elevated blood sugar

**ow to prescribe DBI®-TD (phenformin HCl)**

**start with DBI-TD**

| | |
|---|---|
| **Week 1** | 1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal. |
| **Week 2** | Continue effective DBI-TD dosage.<br>If necessary, add an additional capsule to the A.M. or P.M. dose. |
| **Thereafter** | Continue effective DBI-TD dosage. |

**To transfer from sulfonylurea therapy to DBI-TD alone:** The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

**To transfer from sulfonylurea therapy to combined therapy with DBI-TD:** The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

**lications:** Stable adult diabetes mellitus; sulfonylurea fail-
s, primary and secondary. **Contraindications:** Diabetes mel-
s that can be regulated by diet alone; juvenile diabetes that
uncomplicated and well regulated on insulin; acute compli-
ions of diabetes (metabolic acidosis, coma, infection, gan-
ne); surgery; severe hepatic disease; renal disease with
mia; cardiovascular collapse, after disease states associated
h hypoxemia. **Warning:** Use during pregnancy is to be avoided.
til adequate data on the effects of DBI on the human fetus
available, such use can be considered experimental. **Pre-
utions: Starvation Ketosis,** which must be differentiated
m "insulin lack" ketosis, and is characterized by ketonuria
spite of relatively normal blood and urine sugar, may result
m excessive DBI therapy, excessive insulin reduction or
ufficient carbohydrate intake. Adjustment of DBI-TD or
ulin dosage, or supplying carbohydrates, alleviates this
te. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING
OOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not rec-
mended in the presence of azotemia or in any clinical situa-
n that predisposes to sustained hypotension that could lead
actic acidosis. To differentiate lactic acidosis from ketoacido-
it is recommended that periodic determinations of ketones
in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331. Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

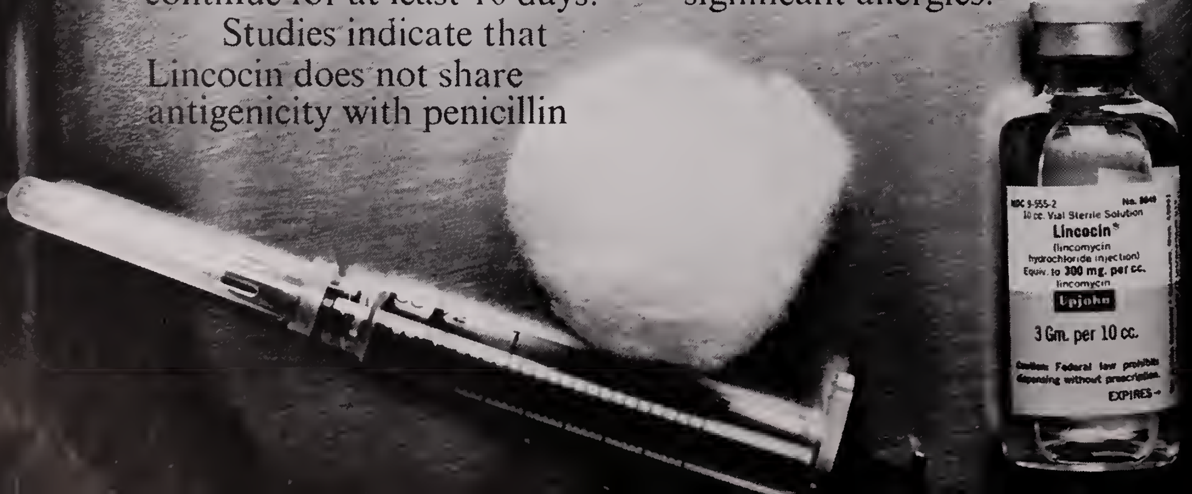
USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV

# Hypersensitivity to penicillin is a good reason to consider Lincocin®

## (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With ß-hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.


NDC 9-555-2
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES→

# So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

● Sterile Solution (300 mg. per ml.) ●

## Lincocin®

## (lincomycin hydrochloride, Upjohn)

NDC 9-555-2
No. 0649
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES →

© 1971 The Upjohn Company

● Sterile Solution (300 mg. per ml.) ●

# Lincocin®

## (lincomycin hydrochloride, Upjohn) for respiratory tract, skin, soft-tissue, and bone infections due to susceptible streptococci, pneumococci, and staphylococc

| Each preparation contains: | Lincomycin hydrochloride monohydrate equivalent to lincomycin base |
|---|---|
| 250 mg. Pediatric Capsule | 250 mg. |
| 500 mg. Capsule | 500 mg. |
| *Sterile Solution per 1 ml. | 300 mg. |
| Syrup per 5 ml. | 250 mg. |

*Contains also: Benzyl Alcohol 9 mg.; and, Water for Injection—q.s.

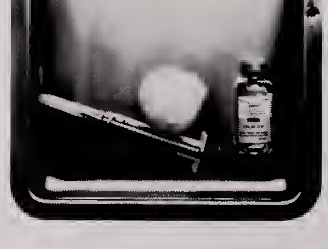
An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances.



*Cardiovascular*—Instances of hypote
sion following parenteral administratio
have been reported, particularly after to
rapid I.V. administration. Rare instanc
of cardiopulmonary arrest have been r
ported after too rapid I.V. administratio
If 4.0 grams or more administered I.V
dilute in 500 ml. of fluid and administe
no faster than 100 ml. per hour. *Loc*
*reactions*—Excellent local tolerance dem
onstrated to intramuscularly administere
Lincocin. Reports of pain following i
jection have been infrequent. Intrav
nous administration of Lincocin in 25
to 500 ml. of 5% glucose in distille
water or normal saline has produced n
local irritation or phlebitis.

HOW SUPPLIED: *250 mg. and 500 m*
Capsules—bottles of 24 and 100.

*Sterile Solution, 300 mg. per ml.*—2 an
10 ml. vials and 2 ml. syringe.

*Syrup, 250 mg. per 5 ml.*—60 ml. and pin
bottles.

*For additional product information, con*
*sult the package insert or see your Upjoh*
*representative.*

JA71-1203 MED B-5-SR (KZL-6

The Upjohn Company
Kalamazoo
Michigan 49001

**Upjohn**

# History of the Medical Society of the District of Columbia

## CHAPTER XIII

### Womans Auxiliary

WIVES OF PHYSICIANS IN WASHINGTON first became active in Medical Society affairs in 1920. A subcommittee, of which Mrs. Charles W. Richardson was Chairman, raised the funds necessary to furnish the Society's building, which is the subject of the next chapter. A tribute to Amy Small Richardson in the form of a memorial tablet was dedicated in the library of the building on April 11, 1938.

The present Woman's Auxiliary was organized in 1925 during the year Dr. Thomas A. Groover was President of the Society. Mrs. Groover was its President. For several years thereafter it was customary to elect as Auxiliary President the wife of the President of the Society. However, this was not strictly adhered to in the 1950s and thereafter.

From the beginning the Auxiliary gave tangible evidence of its deep interest in nursing education. It underwrote financially the training of a large number of nurses in various Washington hospitals. In 1954 there were five nursing-trainees who were beneficiaries of the Auxiliary's Nursing Education Fund.

In 1939 the Medical Society moved the Annual Scientific Assembly from its building to the Mayflower Hotel. The Auxiliary responded enthusiastically to the Society's request for assistance. It provided clerical help, arranged a sightseeing tour for wives of physicians, and gave support to social events.

Committees of the Auxiliary were unusually active during World War II. Stationed in Washington hospitals, they assisted the American Red Cross in a three-day drive for funds. They actively supported the campaign for Bundles for Britain, for funds for the Visiting Nurses Association and the Community War Fund. Individual members volunteered to prepare surgical dressings and bandages at the American Red Cross headquarters.

Highlights of the social events during the War were buffet suppers and dances in the spacious library of the Society building for medical officers stationed in or near Washington. They were most grateful to the Auxiliary for their interest in them.

Over many years the Auxiliary contributed to the upkeep of the Medical Society building–redecorating the library, modernizing the kitchen, installing flood lights in front of the building, assuming a large part of the cost of painting the auditorium, and providing a large silk flag embroidered with the Society's seal. For many years it decorated the stage in the auditorium.

As early as 1940 the Auxiliary assisted in assigning physicians from the Medical Society's Speakers Bureau to speak to lay groups in the community. It also took an active part in the support of many programs of the AMA.

Presidents of the Woman's Auxiliary during the period with which this history is primarily concerned were the following:

1938-39 Mrs. William J. Mallory
1939-40 Mrs. Robert M. Bolton
1940-41 Mrs. Daniel L. Borden
1941-42 Mrs. Caryl Burbank
1942-43 Mrs. A. Magruder MacDonald
1943-44 Mrs. Fred R. Sanderson
1944-45 Mrs. James N. Greear, Jr.
1945-46 Mrs. William Earl Clark
1946-47 Mrs. William P. Herbst, Jr.
1947-48 Mrs. Robert E. Moran, Sr.
1948-49 Mrs. Edgar E. Quayle
1949-50 Mrs. Walter Freeman*
1950-51 Mrs. William M. Ballinger
1951-52 Mrs. Richard E. Dunkley
1952-53 Mrs. Ernest E. Hadley
1953-54 Mrs. Richard H. Todd
1954-55 Mrs. Duane C. Richtmeyer
1955-56 Mrs. Lawrence A. Rapee
1956-57 Mrs. Albert E. Marland, Sr.
1957-58 Mrs. James E. Wissler
1958-59 Mrs. M. Noel Stow
1959-60 Mrs. G. Louis Weller, Jr.
1960-61 Mrs. J. Peter Murphy
1961-62 Mrs. Leo Varden
1962-63 Mrs. John E. Morris

---

* Succeeded during her term of office by Mrs. J. Lawn Thompson, Sr.

# History of the Medical Society of the District of Columbia

## CHAPTER XIV

### Medical Society Building

IT HAD LONG BEEN A DREAM of the Medical Society to have a building of its own. In an address before the Society on December 20, 1865 Dr. Joseph M. Toner, later President of the Society, told his colleagues that it was time for its realization. He expressed the sentiment of most members who were weary of going from one place to another for meetings.

A year later a stock company was formed with authorization to raise $50,000, and not more than $75,000, through the sale of stock to erect a "commodious and fireproof building" to be called The Medical Hall.

A sufficient amount was raised to purchase a lot at 10th and F Streets, N.W. However, the Society went heavily in debt for the erection of a three-story building. The property had to be disposed of because the Society could not raise sufficient funds.

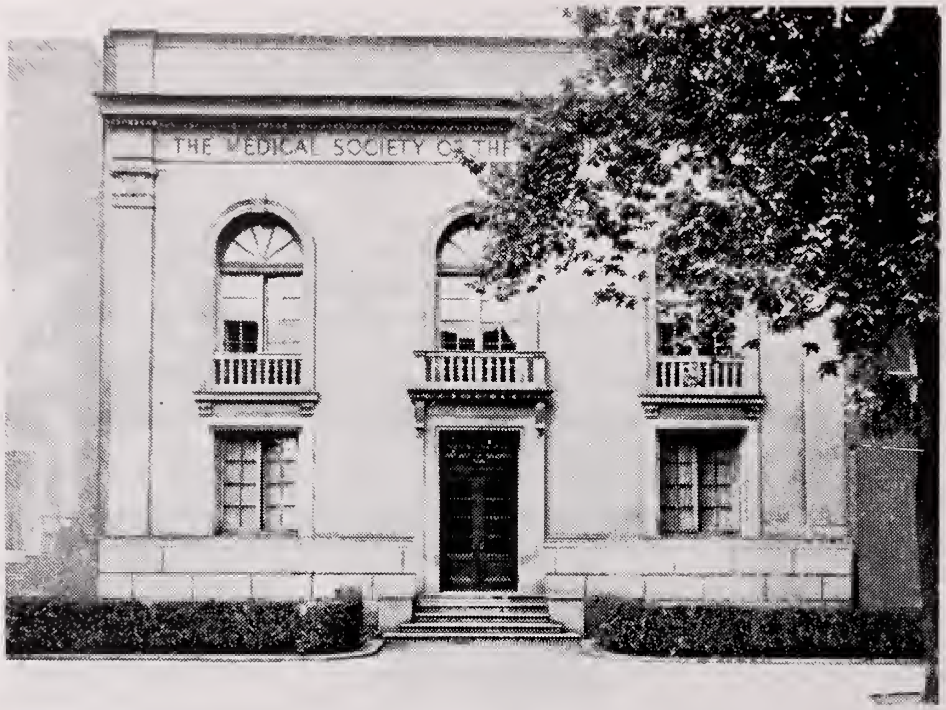
Another abortive attempt to erect a building was made in 1894-1895; another failed in 1911. It was not until 1916 that Dr. Edward Young Davidson, then President of the Medical Society, spoke to the members of the urgent need for a building. This time it was realized. Dr. Davidson was a man of strong will and determination with a singleness of purpose which would not be denied. Whenever he was present in a medical group the building was the topic of his conversation. He could not be dissuaded from his constant insistence on discussing the money needed for his cherished project. Some physicians pleaded with him not to mention the subject at their meetings, but he would not listen.

In spite of many difficulties and obstacles, including demands on the medical profession in World War I, the project never faltered. Dr. Davidson had many able lieutenants, among them Dr. Charles W. Richardson who personally obtained a quarter of the contributions to the building fund. Special assessments were also levied on members for the building program. Even the general public was circularized and personally solicited.

The site chosen for the building was M Street, N.W. between 17th Street and Connecticut Avenue. A deed for the lots was executed in November 1917 by the Sisters of the Visitation of Washington. Payment was completed for the land in January 1919.

Marsh and Peter of Washington were engaged as architects and prepared detailed plans for the building which was to cost approximately $100,000. The building was begun in 1920, and the cornerstone was laid in May of that year. The street number given was 1718 M Street, N.W. Total cost of the lots and the building was $126,368.00.

After two years of intensive effort the building was completed and the first meeting held on January 12, 1921. As an expression of appreciation to Dr. Davidson a commemorative bronze plaque was placed in the lobby announcing The Davidson Lecture. Later, Washington artist Bjorn Egeli painted a portrait of Dr. Davidson which hung for many years in the Board Room.



**Home of the Medical Society of the District of Columbia
1921 - 1965**

In 1937 the Society purchased a six-apartment building to the east which was later to be used in part by the Medical Bureau and as Society offices. There were offices also in the basement, and Board and Committee rooms on the second floor. The remainder of the building consisted of efficiency apartments.

Offices had not been contemplated at 1718 M Street, N.W. when it was first completed. As one entered the lobby there was a lounge on the left and the Board Room on the right. The offices of the part-time Secretary, Dr. Coursen B. Conklin, were in the beginning relegated to the third floor. Finally, however, the offices were moved to the lounge on the first floor.

With the advent of the full-time Executive in 1938 the Board Room became his office and the lounge was used by the clerical staff. The original building was at this time 17 years old. Although not modern by 1962 standards, it was a very handsome building. Its front was of sandstone and at the top was chiseled in large letters The Medical Society of the District of Columbia. An attractive entrance led to a marble-floored lobby. What had been the Board Room and lounge were well lighted by the tall windows permitted by the high ceilings. A large fireplace with brass fixtures added to the impressiveness of the Board Room. There were a cloak room and a men's rest room behind the Board Room and a women's rest room back of the lounge.

Double doors led to the red-carpeted auditorium which had a sloping floor. The skylight, which could be darkened for daytime projection of slides, was three stories above the auditorium floor. There were 486 comfortable seats in the auditorium, many of which bore a small plaque with the name of the donors. The stage lighted by footlights was rather shallow. There was a small balcony at the back of the auditorium.

Carpeted stairs led to the landing on the second floor where a handsome mahogany and glass case with three shelves contained antique instruments and mementoes. At the right of the landing was the library which was two stories high from floor to the ceiling. Large global lights hung from the ceiling. At one end of the library was a fireplace which had been infrequently used for this purpose, above which was hung a large reproduction of the Society's Charter. At each end were bookcases, and red velvet (later gold brocade) draperies hung at each window. Just off the library was a kitchen which from time to time was modernized.

The library was the most attractive room in the building. For years the walls were tinted a pale green, and the book cases, finished in white enamel, were filled with old books. The draperies were in compatible colors.

On the third floor there were a well-equipped projection booth and two sizeable rooms.

**Library in the old Medical Society building**

Mention should be made of the unusually fine furniture in the building, most of it walnut and handmade. It had been purchased, as previously stated, by the wives of the members of the Society at considerable cost. Chairs and lounges had been upholstered in the finest leather.

The library was the scene of such social functions as receptions, teas, and sometimes sumptuous buffets after scientific meetings. It was an impressive setting for such events.

Following World War II weekly scientific meetings were gradually curtailed. It got to the point where the auditorium was infrequently used. The Annual Scientific Assembly had long since been transferred to the Mayflower Hotel and later to the Hotel Statler. Hopefully, improvements were made, offices were air-conditioned, and large fans had been installed above the skylight in the auditorium some years before. Expensive amplifying equipment was installed.

A contributing factor to the disuse of the auditorium was the growth of specialty societies. Other organizations were invited to book meetings without cost to them, and many took advantage of the offer. However, the auditorium became more and more a costly appendage.

Foreseeing this development the Executive Board requested the Society's staunchest supporter, Dr. Oscar B. Hunter, to acquire the building adjoining the original building on the west. It was hoped that when the time came a larger Society building would be erected on the premises.

Dr. Hunter acquiesced with the understanding that the Society could purchase the property at the price he had paid for it. Understandably, he asked that he be protected against any loss. He became an enthusiastic promoter of a plan to replace the Medical Society's building with a 5-story modern structure. This might have been realized but for Dr. Hunter's unexpected death.

With the passing of Dr. Hunter, plans for the new building languished, but in 1962 there were stirrings of another attempt to erect a more modern building.

To many members, even the younger ones, abandonment of the building at 1718 M Street was a "wrench." This, after all, had been the home of the Society for many years, and the thought of its passing was not a pleasant prospect.

# Editorials

## EVOLUTION IN THE LIBRARY

A century ago Ford's Theater in downtown Washington, recently authentically and artistically restored for public use, was an unlikely structure to shelter a library, especially one serving the health practitioners of the time.

The theater's owner, John T. Ford, had experienced earlier reverses when the building was destroyed by fire in 1862, but that was nothing compared to the events of the evening of April 18, three years later, when President Lincoln was assassinated in his box during the presentation of the popular comedy, "Our American Cousin." After the President's tragic death the following morning in a dwelling across Tenth Street from the theater, where he had been taken for examination and treatment by his physicians, plans were made to keep Ford's going, but the nation's turbulent post-war capital was in no mood to attend dramatic performances in a setting of such sad memories. Ford rented, and later sold, the building to the government, which even in those days was apparently short of office space.

Assigned to the Army, the theater was remodeled as an annex of the Surgeon General's Office then occupying crowded quarters above the Riggs Bank at 17th Street and Pennsylvania Avenue. In 1867 Surgeon General Joseph K. Barnes happily moved a growing collection of several hundred medical books, pamphlets and periodicals to the former theater, and sent along also a newly-established medical museum consisting mostly of Civil War anatomical and pathological specimens and, in addition, the Army's mortuary records and chemical laboratory. He and his staff, however, remained at Riggs.

The Ford building was a fire-trap and was poorly constructed, but the 22-year tenancy enabled the embryonic National Library of Medicine (and the museum) to 'go public' long before it became inevitable. Serendipity was at work because the grieving nation rapidly identified the former theater as Lincoln's shrine. Two years after the President's death when the building was re-opened it attracted more than 14,000 visitors from the 36 states and many foreign countries. By 1868 the number of visitors had exceeded 25,000.

The National Library of Medicine, now observing its 135th anniversary, dates its origins from the death in 1836, at 47, of Dr. Joseph Lovell, who had been named the Army's first Surgeon General 18 years earlier. Lovell assembled a collection of medical books and periodicals in his office that has not yet stopped growing. Besides leaving to medical posterity the beginnings of the world's largest library in a single professional field, he also revealed his social foresight by building a handsome residence on Pennsylvania Avenue across from the White House that has been preserved as Blair House, a stopping place for chiefs of state who visit the President.

Though conceived by Lovell, the National Library of Medicine achieved greatness through many who came after him, notably John Shaw Billings, a young Ohio physician on the Surgeon General's wartime staff who, in addition to his many other duties, was appointed librarian in 1865. A man of remarkable dedication, industry and vision, Billings headed the library for 30 years before retiring briefly to the new school of hygiene at the University of Pennsylvania and then to Manhattan where he accepted the formidable task of consolidating the assets of the prestigious Astor, Lenox and Tilden Foundations and building the present New York Public Library.

A pioneer in medical library science as well as in literature indexing and abstracting, Billings truly made the library a national institution. His *Index Catalog* and *Index Medicus,* though modified through the years, have been bibliographic landmarks since 1880. He gained wide support from the medical profession in his long but successful struggle to gain recognition of the library's importance and funds for a suitable building to house its growing collection. The building on the Independence Avenue side of the Mall, recently razed, was first occupied by the library in 1887 but, unfortunately, together with the Army Medical School, the Medical Museum, and the Record and Pension Office. It was inadequate from the beginning. Billings moved on shortly thereafter to be succeeded by his distinguished colleague and assistant for many years, Dr. Robert Fletcher, whose long service continued until 1911, a year before his death at 89.

Re-named the Army Medical Library in 1922 and the Armed Forces Medical Library in 1952, the great repository of nearly 1.5 million medical books and documents on October 1, 1956 finally became officially what it had long been to the medical profession—the National Library of Medicine, and was transferred from the Department of Defense to the Public Health Service. Ten years ago the library was moved to its present home, a building of unique beauty on a wooded knoll in nearby Bethesda, Maryland.

The move came none too soon because the nineteen-sixties brought changes and advances that even the visionary Billings could have hardly conceived. After years of diligent planning and brilliant execution by the library's longtime director, Dr. Frank B. Rogers, and his successor, Dr. Martin M. Cummings, the library introduced its evolutionary computerized Medical Literature Analysis and Retrieval System, soon known to medical librarians throughout the world as MEDLARS.

During the same eventful period Congress passed the Medical Library Assistance Act enabling the National Library of Medicine during the years 1965-1970 to provide $40.8 million in support of 604 projects in the nation's medical libraries that have greatly increased their capabilities in information services for physicians and other users. The Act also authorized designation of 11 mostly university-based regional medical libraries as the beginning of a bioscience communications network.

In 1967 the imposing resources of the Public Health Service's Center for Communicable Diseases in Atlanta for motion picture and television production, and its facilities for creating teaching and research aids, were re-named the National Medical Audiovisual Center and assigned to the Library's jurisdiction. The following year by a Senate Joint Resolution the Lister Hill National Center for Biomedical Communications was established within the library with broad research and development responsibilities in computer and other advanced systems for rapid dissemination of information and services. The center honors the distinguished Alabama senator, now retired, who was long a dedicated Congressional benefactor of the Library.

The MEDLARS computerized system, now with 13 centers throughout the U.S. and 7 in foreign countries, has enabled the National Library of Medicine to publish an increasing number of recurring indexes of articles in current journals and to provide on request retrospective bibliographies of references in specialized fields. Many of the monthly or quarterly bibliographies, available by subscription, are sponsored by national societies of clinical specialists. Others in the fields of toxicology, drugs and environmental health have been created to satisfy increased needs for such information. In fact, MEDLARS' success has stimulated development now underway of a second-generation computer system to increase the efficiency, breadth, and rapidity of medical communication.

Medical students and physicians in the Washington area have long found the modern, spacious reading-room of the National Library of Medicine a scholarly haven for researching medical literature, and they are well represented among the 40,000 persons from all parts of the world who visited the library last year. Most seek information from current literature or data from the vast collection of reference sources. Others retreat to the quiet sanctuary of the history of medicine division where more than half a million treasured volumes printed before 1871 hold the triumphs and tragedies of medicine's early beginnings on their fading pages.

Recently visitors have been intrigued by what appears at first glance to be a conventional teletypewriter in the reference division. Through its keyboard, however, one can carry on an informal 'conversation' with a computer system in Santa Monica, California, and obtain in a few moments a printed bibliography of current clinical articles in whatever subject is desired. This experimental service, called AIM-TWX after the library's new and popular monthly publication, *Abridged Index Medicus,* that comprises its data bank, is under study by the library in nearly 50 U.S. medical centers.

Designed specifically for practicing physicians and smaller hospital libraries, *Abridged Index Medicus* in each issue lists under subject headings all of the articles appearing in 100 leading medical journals printed in English. Through the National Library of Medicine's inter-library loan service, in which all medical libraries participate, one can obtain promptly on request and without cost a photocopy of any article cited in *Index Medicus,* or its recent abridged offspring. The busy physician often need only phone or mail his wants to his area medical library to obtain this service. If the journals are not available locally the citations are referred to the regional medical library, and then, if necessary, to the National Library of Medicine. The library in Bethesda receives an average of 10,000 requests a month for loans of photocopies.

Improved computerized systems, remote information systems, data transmission via satellite, and other products of electronic communication are transforming medical libraries into living, vibrant information centers to meet the increasing demands of bioscientific progress. The hub of this worldwide network is the National Library of Medicine.

# The Armed Forces Institute of Pathology Moves Forward

**LTG Hal B. Jennings, Jr., MC, USA (left); VADM George M. Davis, MC, USN (center); and LT GEN Alonzo A. Towner, USAF MC (right), the three Surgeons General, officially unlocking the door to the new Armed Forces Institute of Pathology Medical Museum.**

On May 21, 1971, the friends of the Armed Forces Institute of Pathology gathered at the south end of that structure to celebrate two important events in the history of that famous organization. The guest list read like "Who's Who in American Pathology" as the attendees recognized the golden anniversary of the American Registry of Pathology and the reopening of the renovated renowned Medical Museum in its new quarters located in the newly constructed south wing of the "AFIP."

The American Registry of Pathology (ARP) was created in 1921 through an agreement by the War Department to cooperate with civilian medicine by establishing a Registry of Ophthalmic Pathology at the old Army Medical Museum. This registry was to be funded by the American Academy of Ophthalmology and Otolaryngology while operating as a part of the military organization in order to accumulate and centralize the important specimens for study. This relationship was so successful that the American Registry of Pathology has grown to become a multifaceted organization composed of 27 separate registries operating as one department in the Armed Forces Institute of Pathology, and it is this organization that has enabled the entire medical profession to use the services of this world-renowned organization. The ARP was operated from 1930 to 1965 under the guidance of the National Academy of Sciences-National Research Council and since that date has been supervised by "Universities Associated for Research and Education in Pathology, Incorporated," which is closely allied with the Federated Societies for Experimental Biology. Through this mechanism the Armed Forces Institute of Pathology and the American Registry of Pathology are able to publish the fascicles of the Atlas of Tumor Pathology and produce numerous training aids and loan sets with worldwide usage rates that reach almost astronomical figures.

The Medical Museum was first established on May 21, 1862, by the Surgeon General, William Hammond, as an educational instrument for his military physicians. Hence, the 21st of May has been regarded as "Founder's Day" at the AFIP. After the Civil War, while situated on the third floor of Ford's Theatre, scene of the Lincoln assassination, the Museum became a favorite visiting place for the public, and hence its character was somewhat changed. From

1887 to 1968 it was housed in the famed "Old Red Brick" structure on 7th and Independence Avenue, S.W., or its associated temporary structures, and on October 4, 1968, it was officially closed during a nostalgic ceremony, its contents to be placed in temporary storage awaiting the construction of its future home in the new south wing of the AFIP on the Walter Reed Army Medical Center campus. This was necessitated by the pending destruction of the "Old Red Brick" building to make way for a new art museum on the Mall.

After introductions by the Director and appropriate remarks by Lieutenant General Hal B. Jennings, Jr., MC, USA, he, as the Chairman of the AFIP Board of Governors, joined by the other members, Vice Admiral George M. Davis, MC, USN, Surgeon General of the Navy, and Lieutenant General Alonzo A. Towner, USAF, MC, Surgeon General of the Air Force, officially unlocked the door to the Museum and opened it to the public. The throngs poured into the structure and were free to ramble through the four major halls furnished with their many interesting exhibits. The Hammond Hall of Pathology displayed numerous specimens of pathologic tissue, while the Billings Hall of Instruments presented the famed Medical Microscope Collection and other pertinent displays. The Silliphant Hall of Current Events featured new developments in medicine, including an exhibit on Man and His Environment. Although the Brinton Hall of History was not to be completed for another month, small models showed the types of displays to be erected. As was customary in the old Museum in the past, the new Museum will be open 7 days a week from 9:00 a.m. to 5:00 p.m. and will have a Museum store where AFIP mementos may be purchased.

It is fitting that the Armed Forces Institute of Pathology and her friends took time to pause, reflect, celebrate, and look to the future. It is hoped that the members of our profession, as well as the public, will take time to visit the Museum.

BRUCE H. SMITH
*Captain, MC, USN*
*Director, Armed Forces Institute of Pathology*
*Washington, D. C.*

## Clinical Center Studies

The cooperation of physicians is requested in the referral of patients for studies of hemolysis and bilirubin metabolism being conducted by the Metabolism Branch of the National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Two categories of patients are needed:

(1) Patients with chronic hemolytic states, either hereditary or acquired. Patients with congenital spherocytosis prior to splenectomy or with autoimmune hemolytic anemias are particularly suitable for these studies, but any patients with chronic hemolytic anemia will be considered.

(2) Patients with specific abnormalities of bilirubin metabolism, such as Gilbert's, Dubin-Johnson or Crigler-Najjar *syndromes.*

Of particular interest are adolescents and adults who are ambulatory. Suitable patients will be admitted to the Clinical Center for study.

Physicians interested in having their patients considered for admission to these studies may write or telephone: Dr. Paul D. Berk, Clinical Center, Room 4N-117 National Institutes of Health Bethesda, Maryland 20014 Telephone: (301) 496-5955

The cooperation of physicians is requested in the referral of patients for the study of chronic diarrhea being conducted by the National Heart and Lung Institute's Experimental Therapeutics Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients with chronic diarrhea due to regional enteritis, nontropical sprue, short bowel syndrome or dumping syndrome with hypermotility are needed for this study. Patients requiring steroids are not suitable. Selected patients will be admitted for evaluation and treatment with either standard or experimental agents.

Upon completion of their studies, patients will be returned to the care of the referring physician, who will receive a summary of findings and any recommendations.

Physicians interested in having their patients considered for admission to these studies may write or telephone: Dr. Harry R. Keiser, Clinical Center, Room 7N-256 National Institutes of Health Bethesda, Maryland 20014 Area Code 301-496-2044 or 2452 Dr. Hein Besselaar, Area Code 202-331-6369 (a.m.) Area Code 301-496-5377 (p.m.)

# ►D.C. MENTAL HEALTH ADMINISTRATION

## An Innovative Man for A Renovated Service

The District of Columbia faces numerous problems. The crime rate is among the highest in the nation and barely in control, illegitimate births and death rates of the newborn are continuing problems, the solution for which is still being sought. Cases of Venereal Disease are skyrocketing among the District's population. Alcoholism is more prevalent in the District than at any time in it's history. Drugs have hit our public schools in unprecedented amounts and variety. Plainly, new programs to combat these problems must be found with new kinds of administrators to run them. The District needs dynamic, innovative, trained administrators as it has never before in it's history. It has just placed such a person in the Directorship of the Department of Human Resources, Mental Health Administration. He has his work cut out for him.

Last month alone, there were 969 client-oriented calls to the Suicide Prevention Bureau, 637 alcoholics newly admitted to inpatient or outpatient status for rehabilitation, 1,501 alcoholics treated at the Detoxification Center, and 63 persons handled by the Forensic Psychiatry Office. The case load for all DCMHA agencies last month was over 8,000 people, well over 2,000 of whom were children and adolescents. These figures barely touch the surface of the burgeoning need but they do strain the limits of present staff and funding levels.

The District has tried numerous programs in the past, and still the problems remain. Mental Health Agencies have had competent leadership in the past, and still the problems are with us. Whether Dr. Noel can solve the problems remains to be seen. Many professional people in the District of Columbia want to know what he brings to the task that elevates the probability of his solving problems that others have found so difficult.

His professional qualifications are intact: He was born in Salem, Virginia, in 1923, attended Stratton High School in Beckley, West Virginia before receiving his Bachelor of Science degree from Virginia State College, and his M.D. at Meharry Medical College in Nashville, Tennessee. He completed his psychiatry residency at Howard University, later joining the faculty of the College of Medicine as Instructor and Director of Psychiatric Inpatient Services in the Department of Neuro-psychiatry. He has won numerous honors and awards, including the "Physicians Recognition Award" from the American Medical Association in 1969. He has served as President of the Greensboro Medical Society in Greensboro, N. C., and is a fellow of the Royal Society of Health.

**Essex C. Noel III, M.D.**

Dr. Noel feels that one with a background as a generalist is better equipped to preside over such an agency as the Mental Health Administration because of the wide assortment of professions encompassed within it, all of whom must be understood from their various points of view. He can be considered such a generalist for his background shows him working in such settings as private practice in general medicine, the military, schools, private industries, general hospitals, colleges, public agencies and the Veterans Administration. Since coming to the DCMHA, he has passed the Family Practice Specialty Board.

He has worked closely in the past with psychologists, social workers, educators, vocational rehabilitation counselors, and of course nurses, to name a few. Much of this in mental health settings, and all of whom he has been asked to supervise now.

In a city whose welfare cases have increased by 10,000 since last year, he brings a history of growing up in the poorest section of Appalachia. Of buying food at the company commissary until the script ran out, and then doing without. He feels as much at ease in the ghettoes and slums of the District as in the halls of the Senate where he pleads for funds to rescue the people whose problems he understands.

Commenting on the 969 persons who called the Suicide Prevention Bureau last month, he says that these people must be taught how to live. How to live a responsible, emotionally satisfying life. A life full of interests, of challenges. This statement is without a hollow ring from a man whose extracurricular activities include photography, hybrid tea roses, boating, piloting planes, and even a stint or two as a lifeguard at a public pool, among many others.

21,033 alcoholics were treated in the District's Alcoholism programs last year alone. Dr. Noel has authored papers on the care and medical management of alcoholics, as well as their rehabilitation back to the community.

Other problems? He has in his hands various reports from numerous committees, task forces, commissions and the like, all deploring the fact that the District Government has not achieved mental health for all of its citizens. That is what task forces do. The present state of the psychiatric arts will never yield such an utopia and Dr. Noel does not expect it.

He does expect his Administration to eliminate the inequity of treatment between the various subgroups of people falling within his domain; he does expect to provide services for more of the District's citizens and for a wider assortment of complaints. He does intend to forge a closer working bond between the public and private treatment sectors. He does expect the District's citizens to become aware of the help that is available to them and to learn how they may take advantage of it. And so on. The list is long.

As to his personal philosophy, he sees the mentally healthy person as one who lives a creative, constructive, energized life. One that is realistically goal-oriented. These people do not need his help. They need to help him instead. On the other hand, he sees those persons who are living a noncreative, nonconstructive, energy depleting life that is full of nonrealistic goals as the people whose mental health is endangered. These are the ones who need his help. A third group, the persons whose life more resembles a psychological holding action, people who are existing but not utilizing real living skills, to be another group he should serve.

Many people find blocks between them and the kind of life they would like to be living. These may be personal, social, or political. Personal blocks are those that psychiatrists are taught to handle. Dr. Noel also feels that a good administrator should also hammer away at the social and political blocks that stand in the way of personal fulfillment. He was the first Negro doctor to serve in a forcefully integrated hospital in the U. S. He was the man who forced its integration, leading a team of doctors and lawyers all the way to the Supreme Court to abolish this block.

He understands the bureaucracy within which he must work, but dislikes politics as such. "Red tape never cured any patient," seems to be his attitude, and for himself he chooses straight talk over the nuances of subtle political gaming.

The problems falling under his administration are immense, as are those in the District in general, but it looks as though he may stand a better chance of solving some of them than almost any other administrator the District could have selected. If he doesn't, it will most likely be due to limited financial and human resources with which to work. It will not be due to a lack of training, intelligence or enthusiasm on his part.

In summary, Dr. Noel is here to do a near-impossible job and he intends to do it. And he appears qualified for the task.

RAY D. SMITH, Ph.D., with
JAMES A. VANDERPOOL, Ph.D.*

---

* From the Center for Alcoholic Rehabilitation, Occoquan, Virginia.

Ulcer
Re-
lief!

**Dicarbosil**®
ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

# The causes of vaginitis are multiple

**Trichomonads . . . monilia . . . bacteria**
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

**AVC**
**Cream** (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

**Suppositories** (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

**Contraindications:** Known sensitivity to sulfonamides.
**Precautions/Adverse Reactions:** The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
**Dosage:** One applicatorful or one suppository intravaginally once or twice daily.
**Supplied:** Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.
TRADEMARK: AVC AV-104 2/71 Y-149

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

# AVC
# The treatment is singular

# A
# BUILDING BLOCK
# TO RECOVERY

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs One tablet q.i.d.
Trypsin 100.000 N.F. Units, Chymotrypsin 8.000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma
One tablet q.i.d.

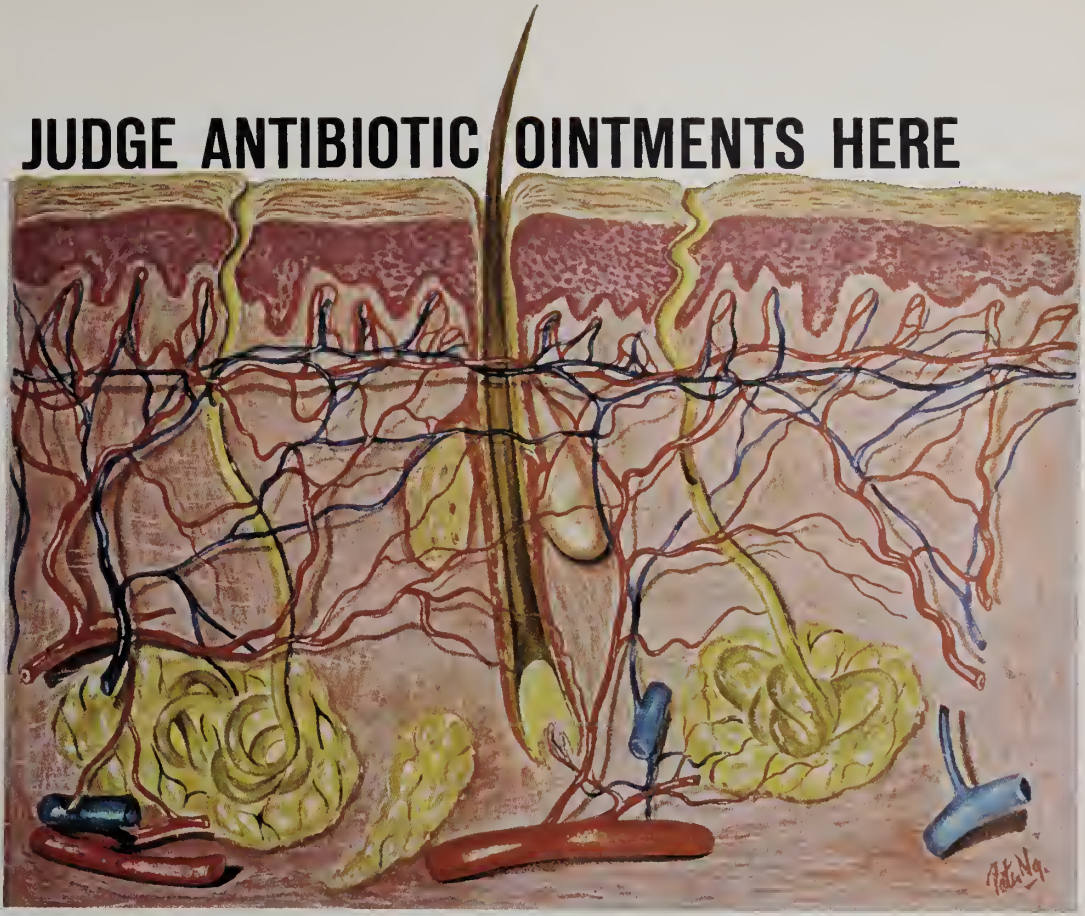
**Indications:** When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
**Contraindications:** ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
**Precautions:** It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
**Adverse Reactions:** Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
**Dosage:** One tablet q.i.d.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**
TRADEMARK: BITABS U.S. PATENT NO 3,004,893 9/70 0-009A 161

# Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

# JUDGE ANTIBIOTIC OINTMENTS HERE



## Results on skin are final proof of any topical antibiotic's effectiveness

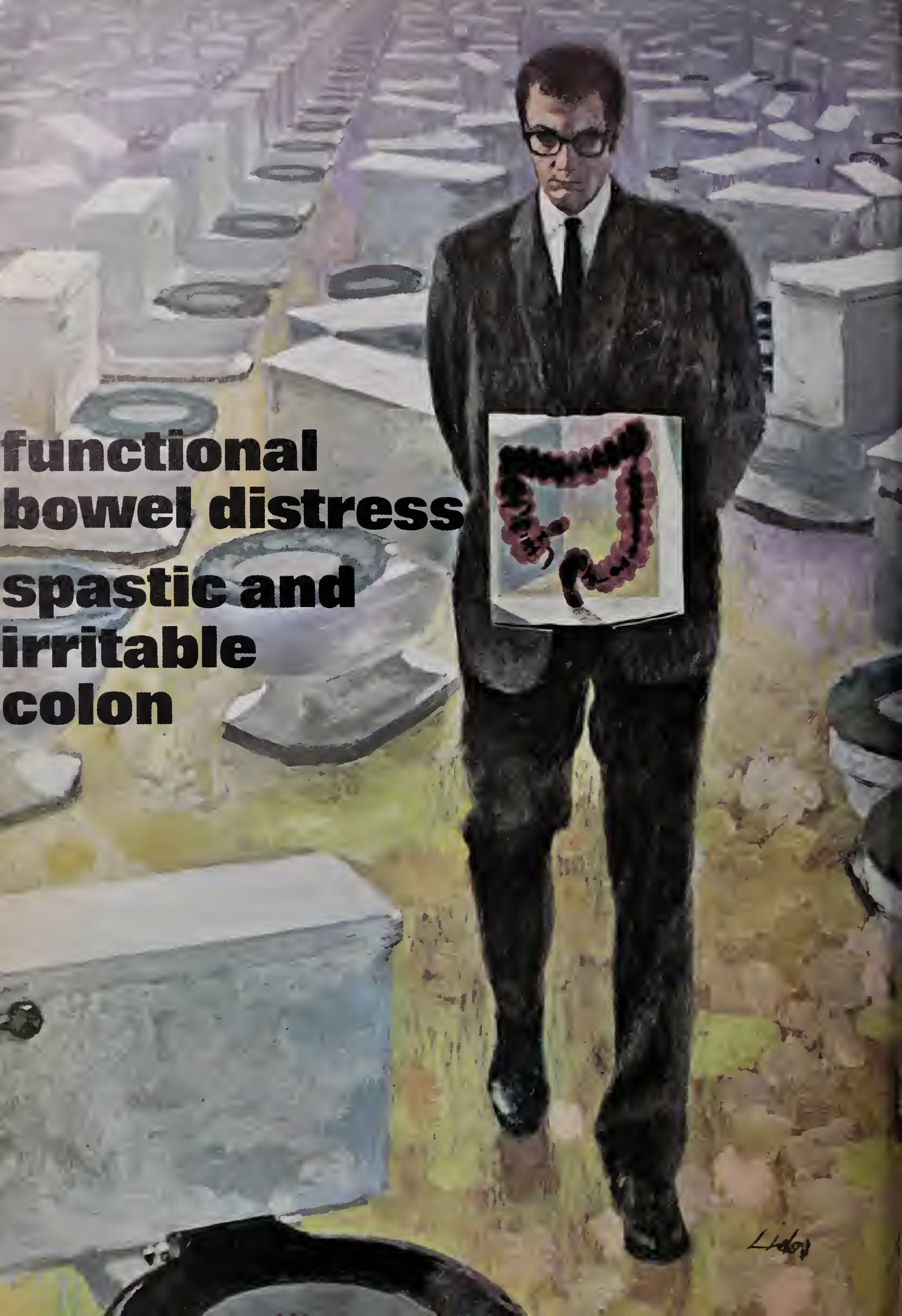
**No in vitro test can duplicate a clinical situation on living skin.** 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

**Caution:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.
**Contraindications:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
**Supplied:** Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.
Complete literature available on request from Professional Services Dept. PML.

# 'NEOSPORIN'®
brand

## POLYMYXIN B-BACITRACIN-NEOMYCIN
## OINTMENT

**BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.**


functional
bowel distress
spastic and
irritable
colon

**vhen lower**
**i-I symptoms**
**lemand**
**potent**
**ynthetic**
**ntispasmodic**

**move up to**
**“the Robinul**
**response”**

In treating hypermotility associated with functional lower G-I disorders are you disappointed in the results you've been getting with some of the synthetics? Then *move up* to a potent antispasmodic—Robinul® Forte (2 mg. glycopyrrolate). It provides prompt, pronounced, prolonged suppression of hypermotility, making it a highly effective agent in functional bowel distress, as well as in spastic and irritable colon. Robinul Forte also exerts a more selective action on the gastrointestinal tract. If the patient has a "one tract mind" concerning his lower G-I symptoms, you can help control the anxiety and tenseness by prescribing Robinul®-PH Forte (2 mg. glycopyrrolate with 16.2 mg. phenobarbital —warning: may be habit forming).

**Robinul® 2 mg.**
**Forte** (glycopyrrolate)

ICATIONS Robinul Forte (glycopyrrolate, 2 mg.) and Robinul-PH Forte are double-strength dosage forms of glycopyrrolate. They are primarily
ted for patients who are less responsive to anticholinergic therapy and for control of the more prominent symptomatology associated with
episodes of gastrointestinal disorders. Emphasis should be on total management, with due consideration of the various therapeutic modalities
ble, including diet, antacids, anticholinergic agents, sedatives, and attention to emotional problems. Accordingly, glycopyrrolate is recom-
ed in the management of gastrointestinal disorders amenable to anticholinergic therapy, such as: (1) duodenal ulcer, duodenitis, pylorospasm;
stric ulcer, gastritis, esophageal hiatal hernia, hyperchlorhydria, pyrosis, aerophagia, gastroenteritis; (3) esophagitis; (4) cholecystitis, chronic
eatitis; (5) spastic and irritable colon, ulcerative colitis, functional bowel distress, diverticulitis, acute enteritis, diarrhea; and (6) splenic flexure
ome, neurogenic gastrointestinal disturbances. When these conditions are associated with psychic overlay, the formulation with phenobarbital
e indicated. ■ CONTRAINDICATIONS Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric reten-
rostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH
(glycopyrrolate with phenobarbital), sensitivity to phenobarbital. ■ PRECAUTIONS Administer with caution in the presence of incipient
ma. ■ SIDE EFFECTS The most frequent side effect noted during clinical trials was dry mouth. Thirty-three (3.3%) of 1,009 patients receiving
2 mg. of glycopyrrolate a day complained of dry mouth of moderate to severe degree, but only 11 discontinued treatment because of this.
d vision, constipation, and urinary hesitancy have been reported infrequently. Other side effects associated with the use of anticholinergic
include: tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsi-
and rash. ■ DOSAGE The average and maximum recommended dose of Robinul Forte (glycopyrrolate, 2 mg.) or Robinul-PH Forte is one
three times daily (in the morning, early afternoon, and at bedtime). To obtain optimum results, dosage should be adjusted to the individual
t's response. After the more severe symptoms associated with acute conditions have subsided, the dose may be reduced to the minimum
ed to maintain symptomatic relief. ■ SUPPLY Robinul Forte (glycopyrrolate, 2 mg.) is available as scored, compressed pink tablets engraved
2 in bottles of 100 and 500. ■ Robinul-PH Forte (glycopyrrolate, 2 mg., with phenobarbital, 16.2 mg.) is available as scored, compressed blue
engraved AHR/2 in bottles of 100 and 500.

A. H. Robins Company, Richmond, Va. A·H·ROBINS

# The all-day, all-night summer cold and allergy pill.

Novahistine LP can give your patients the convenience of twice-a-day dosage—morning and bedtime—along with prompt relief from the symptoms of allergic rhinitis, hay fever or summer colds. These continuous-release tablets contain a vasoconstrictor-antihistamine formulation that goes to work rapidly and lasts for hours. Even when nasal congestion is the result of repeated allergic episodes, patients can usually enjoy around-the-clock relief. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

DOW THE DOW CHEMICAL COMPANY, Rx Pharmaceuticals, Indianapolis

**Novahistine**(R)
**LP** decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

# D.C. HEALTH NOTES

## Lead Poisoning Screening

The successful conclusion of a Lead Poisoning Screening pilot project in the District of Columbia in June 1970 has led to a grant by the Model Cities Commission to the Community Health Services Administration for a mass screening program in the Model Cities Area.

About 11,000 children, ages 1 though 6 in the Model Cities Area, will be tested for lead poisoning under a grant of $204,154.

In charge of the year-long program is Mrs. Katherine James, Project Coordinator, and Mrs. Olvida Pickett, Supervisor of Field Operations. Dudley Anderson, Chief, Accident Prevention Division, Community Health Services Administration, is the overall director of the lead-detection project, and Jerry Matthews is directing community services.

For the screening program, the Model Cities Area has been divided into 20 wards and a Mobile Health Unit will cover the entire area ward by ward. The principal purpose behind the lead-screening program is the prevention of mental retardation caused by lead poisoning.

Children seen regularly at selected Well-Baby Clinics of the Community Health Services Administration are being tested for lead poisoning on a routine basis. CHSA Neighborhood Health Centers are open to all parents who wish to have their children tested for lead poisoning.

An estimated 50,000 children live in dilapidated houses in the District of Columbia with about 5,000 having an elevated blood level of 40 micrograms and above per 100 milliliters of whole blood. It is estimated that 1,300 children in the Model Cities Area have elevated blood lead levels.

Although the District government prohibits the use of lead paint for interior use, many older houses and apartments were constructed when lead paint was used extensively. Chipped and flaking paint is eaten by many children, 1 through 6 years of age. Many victims of lead poisoning are children with pica, a condition that gives them a craving for unnatural food, such as starch, chalk, peelings, chips, or flakings of paint.

Symptoms of lead poisoning might include stomach ache, convulsions, drowsiness, irritability, constipation and/or diarrhea. Prompt and accurate diagnosis prevents mental retardation. But, as many physicians have learned to their chagrin, the symptoms of lead poisoning are similar to many other diseases, so that an accurate diagnosis is essential.

All cases of elevated lead levels of 40 micrograms per 100 milliliters of whole blood or above are reported to the Housing Division, which promptly investigates the houses in which the children live and requests landlords to remove or cover flaking paint.

The District government in April 1970 adopted a law making Plumbism a reportable disease, which must be reported within 72 hours to the Community Health Services Administration. To date, 169 cases of lead poisoning have been reported to the Administration.

The success of Pilot Lead Screening Project in June 1970 was due particularly to community cooperation. Without the efforts of the United Planning Organization, the Medical Committee on Human Rights, and employees of the National Institutes of Health, the project would not have been the success it was.

The 10 neighborhood and community centers were used as screening stations in the Anacostia, Cardoza, Model Cities, and Southwest areas of the District.

During the week of June 2-8, 1970 all screening stations were open from 6:30 to 9:30 p.m. Monday through Friday and from 12:30 to 4:30 p.m. on Saturday. Volunteer workers in the areas encouraged parents to bring their children to the clinics for testing.

A total of 826 blood specimens were drawn. Fifteen of the 826 blood samples collected did not have sufficient amounts of blood for analysis and three samples were drawn on adults and were not included in the results.

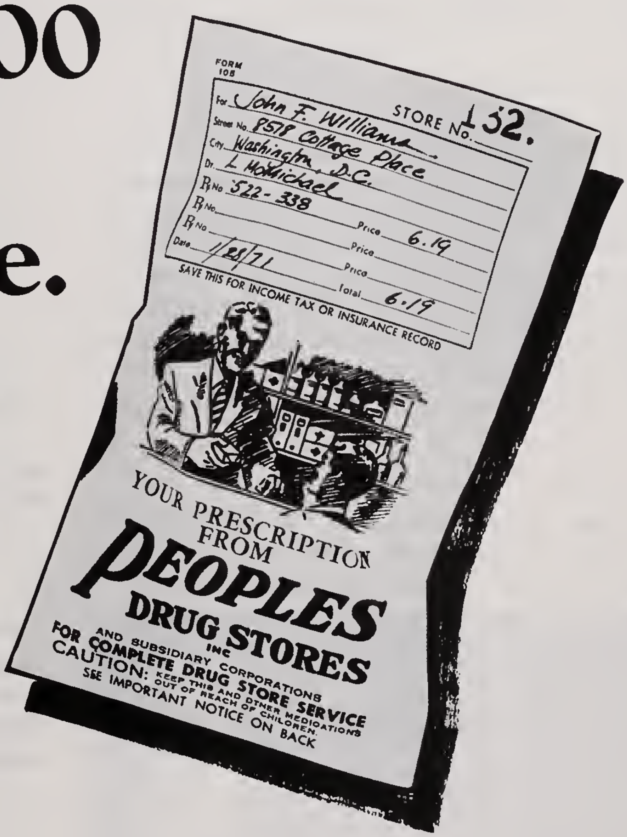
Of the 808 children, 20.8% were reported to have some pica practices while 44.6% of all children with blood lead levels of 40 micrograms per 100 milliliters of whole blood or greater reported pica practices.

Forty-seven children were referred for additional diagnosis and treatment and at least five of these have been admitted to a hospital for treatment.

All parents with children from ages 1 through 6 are being urged to have their children tested for lead poisoning at the earliest possible moment. This is being accomplished through personal contact, community groups, newspapers, radio and television.

RAYMOND L. STANDARD, M.D., M.P.H.
Director of Public Health
Associate Director, Department of
Human Resources

The bag that has earned more than 125,000,000 votes of confidence.



FORM 105
For John F. Williams STORE No. 152.
Street No. 8518 College Place
City Washington, D.C.
Dr. L McMichael
℞ No 522-338
℞ No. Price 6.19
℞ No Price
Date 1/28/71 Price
Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD

YOUR PRESCRIPTION FROM
PEOPLES
DRUG STORES
INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN.
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

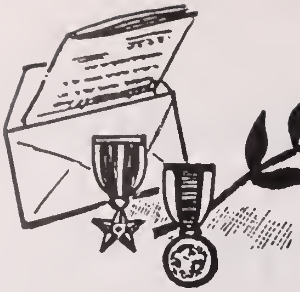
**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®

PRESCRIPTION DRUG STORES

WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.



# News & Personals

## SUMMARY OF EXECUTIVE BOARD ACTIONS

### Proceedings of the May 24 Meeting

Dinner was served for Board members in the Exhibit Hall of the Medical Society. Present were Drs. Henry D. Ecker, Chairman, James E. Boland, Warren D. Brill, C. Willard Camalier, Jr., John J. Hughes, Marvin C. Korengold and F. P. Ferraraccio, Secretary. Present by invitation were Mr. John Lewis Smith, III, Dr. Brooks Brown, Dr. Karl Corley, Dr. Desmond O'Doherty and Dr. F. C. Mazle.

The meeting was called to order by the Chairman at 7:15 p.m.

**Group Hospitalization, Inc.:** In the interest of maintaining a liaison with GHI, Dr. Karl C. Corley and Dr. Brooks Brown, representing the Board of Trustees of GHI, met with the Executive Board for discussions. The topics discussed included coverage for extended care facilities, Health Maintenance Organizations and Medicare.

The minutes of the April 26 meeting were approved as submitted.

**Committee Meetings:** The Secretary reported the following committees had met since the last meeting of the Board:

| | | |
|---|---|---|
| April | 28 | Ruffin and Other Bequest Funds |
| | | Smoking and Health |
| | 30 | Public Welfare |
| May | 5 | Fee Review |
| | | Society Insurance |
| | | Child Welfare |
| | | Constitution and Bylaws |
| | 6 | Medical Bureau |
| | | Physician Placement |
| | 10 | Membership |
| | 11 | Ethics |
| | | Board of Credentials |
| | | Rehabilitation |
| | 12 | Mental Health |
| | | Smoking and Health |
| | 14 | Utilization |
| | 18 | Grievance |
| | | Liaison with Allied Professions |
| | 19 | Legislative |
| | | Drug Abuse |
| | | House and Building |
| | 20 | Communicable Disease |
| | | Continuing Education |
| | 21 | Medical Aspects of Sports |
| | | Occupational Health |

**Special Meetings:**

| | | |
|---|---|---|
| April | 28 | AMA/ERF presentation to Deans |
| May | 5 | Utilization Workshop |
| | 12 | Annals Subcommittee |
| | 17 | Annals Subcommittee |

**Board of Credentials:** On recommendation of the Board of Credentials 14 applicants were elected to Active membership. 4 to Associate membership, 2 to Resident-Intern membership, and 27 to Student membership.

Transfers

*Active to Associate:* A. A. Levine, Gerald McAteer, Helen Ossofsky and Lois Young

Reinstatement

*Associate:* Herbert Gates

Resignations

*Active:* Richard L. Bohannon, Marc Vincent and Don S. Wenger

*Associate:* Yeong-Cheol Koh

*Honorary Members:* Dan C. Ogle, Leroy Burney and Luther Terry

With regard to the number (50) of student applications, Dr. Korengold pointed out that he had spoken to groups from both Georgetown and George Washington Medical Schools and at that time prompted the students to join. No applications have been received from Howard.

**Vacancy on the Executive Board**: After several nominations, a motion was made and unanimously carried that Dr. Leslie E. Hedgepath be appointed to fill the unexpired term of Dr. Frank S. Bacon.

**MDBRF**: Dr. Korengold reported that he had met with Mr. F. P. Ferraraccio and Mr. John Lewis Smith. It is recommended that the present framework of the foundation be retained but that the Board should exert its prerogative of nominating three new Board members; these nominees should be users of the computer service.

**Foundation Subcommittee**: It was reported that representatives from Hennepin County will be in Washington in June either just before or just after the AMA Convention to discuss Health Maintenance Organizations. A luncheon meeting is being planned by Dr. James Boland.

**Annals Subcommittee**: Upon recommendation by the Subcommittee, a motion was made and carried that Dr. Raymond Scalettar be appointed Associate Editor of the Medical Annals of the District of Columbia.

**Liaison with Allied Professions Committee**: After reviewing the recommendation made by this Committee, a motion was made and carried to approve the recommendation in principle but to suggest several editorial changes for the purpose of clarity to be prepared by our staff.

**Grievance Committee**: A motion was made and carried that Dr. Darrell Crain, Dr. Frank Pellegrini and Dr. Warren Brill be appointed as a subcommittee to formulate criteria by which to judge the problem of the physician who is unable to maintain his practice.

### Other Business

1. **Executive Board Agenda**: A motion was made and carried that material submitted for action by the Executive Board be in at least 10 days prior to the next Board meeting.

2. **Section on Psychiatry**: A motion was made and carried to recognize the reactivation of the Section on Psychiatry.

3. **Communicable Disease Committee**: Dr. Korengold pointed out that May is Venereal Disease month, after which, a motion was made and carried to approve the recommendation of the Communicable Disease Committee.

4. **Comments by Dr. Korengold**:

A.) The Medical Society of D.C. has appeared before the House District Committee on two occasions (1) for the Incorporation Bill which was favorably received, and (2) the Healing Arts Practice Act which was favorably received but opposed by the D.C. Government.

B.) He has been asked by the President of the Montgomery County Medical Society to exchange visits by one or two members of opposing boards at respective board meetings.

C.) Dr. Clifton Gruver, Chairman of the Environmental Health Committee is planning a "Conference on Water Pollution, Supply, Quantity" in July.

D.) Because of the treatment of physicians and paramedical personnel during recent demonstrations (one member of the Society was arrested), meetings have been set up for all concerned parties to discuss guidelines for future demonstrations.

5. **Next Executive Board Meeting**: In order not to conflict with the AMA Convention and to give Board members time to review material for the next meeting, the next Board meeting will be held on July 12.

There being no further business the meeting was adjourned at 10:25 p.m.

DataMedics

**The result is total management control & increased cash flow**

DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:

- Billing
- Bookkeeping
- Collecting delinquent accounts
- Designing offices
- Leasing equipment
- Preparing insurance claim data
- Preparing payroll tax data
- Recruiting personnel
- Training personnel

**How?**
Consultation by appointment.

DM

**DataMedics, Inc.**
**National Headquarters**
**7979 Old Georgetown Road**
**Washington, D.C. 20014**
**(301) 654-7666**
**Cable/Medic**
**Baltimore (301) 792-4424**

# ►NEW MEMBERS

## Active

JOSEFINO M. CEBALLOS, M.D. Office: 4601 Nichols Avenue. Born in Pototan, Iloilo, Philippines. Medical degree: University of East Ramon Magsaysay, 1962. Specialty: General Surgery.

CRISTINA CHAN, M.D. Office: 110 Irving Street. Born in Philippines. Medical degree: University of Santo Tomas, 1964. Specialty; Anesthesiology.

SAMUEL M. FOX, M.D. Office: 2150 Pennsylvania Avenue. Born in Andalusia, Pennsylvania. Medical degree: University of Pennsylvania, 1947. Specialty: Internal Medicine–Cardiology.

MARIO GOMES, M.D. Office: Georgetown Hospital. Born in Portugal. Medical degree: University of Porto Medical School, 1958. Specialty: Thoracic Surgery.

WILLIAM L. HALLER, M.D. Office: 2125 13th Street. Born in Chicago, Illinois. Medical degree: University of Berne, Switzerland, 1961. Specialty: Pediatric Neurologist.

WILLIAM JOSEPH, M.D. Office: 2150 Pennsylvania Avenue. Born in Youngstown, Ohio. Medical degree: Ohio State Medical School, 1962. Specialty: Surgery.

MARLENE N. KELLEY, M.D. Office: 635 H Street, N.E. Born in Atlantic City, New Jersey. Medical degree: Howard University, 1965. Specialty: Internal Medicine.

CHARLES KLINGENMAIER, M.D. Office: 901 23rd Street, N.W. Born in York, Pennsylvania. Medical degree: University of Pennsylvania, 1964. Specialty: Anesthesiology.

URIEL LEE, M.D. Office: 2700 Nichols Avenue, S.E. Born in British West Indies. Medical degree: Howard University, 1965. Specialty: General Surgery.

DETRAD MANGUIKIAN, M.D. Office: 2150 Pennsylvania Avenue. Born in Beirut, Lebanon. Medical degree: American University of Beirut, Lebanon, 1966. Specialty: Ophthalmology.

ESMAIL MASOUD-POUR, M.D. Office: D.C. General Hospital. Born in Esfahan, Iran. Medical degree: University of Teheran, 1960. Specialty: Orthopedic Surgery.

JORGE C. RIOS, M.D. Office: 2150 Pennsylvania Avenue. Born in Buenos Aires, Argentina. Medical degree: University of Buenos Aires, 1959. Specialty: Cardiology.

ROBERT B.W. SMITH, M.D. Office: 2400 H Street, N.W. Born in Recibe, Brazil. Medical degree: Columbia University College of Physicians and Surgeons, 1949. Specialty: Internal Medicine–Pulmonary.

ROGELIO G. SION, M.D. Office: Freedmen's Hospital. Born in Cotabato City, Philippines. Medical degree: University of East Ramon Magsaysay, 1965. Specialty: Internal Medicine.

## Associate

MEHRDAD JAVEDAN, M.D. Office: 4130 Hunt Place, N.E. Born in Hamadan, Iran. Medical degree: Teheran University, 1960. Specialty: Pediatrics.

DAVID SATINSKY, M.D. Office: 10401 Old Georgetown Road, Bethesda, Maryland. Born in Philadelphia, Pennsylvania. Medical degree: University of Pennsylvania, 1964. Specialty: Neurology.

JOHN C. SEYMOUR, M.D. Office: 5480 Wisconsin Avenue, Chevy Chase, Maryland. Born in England. Medical degree: George Washington University School of Medicine, 1965. Specialty: Internal Medicine.

ARSENIO SORIANO, M.D. Office: 5620 St. Barnabas Road, Oxon Hill, Maryland. Born in Manila, Philippines. Medical degree: University of the Philippines, 1963. Specialty: Obstetrics-Gynecology.

## Resident-Intern

JOSEPH H. AUTRY, M.D. Office: NIMH St. Elizabeths Hospital. Born in Pine Bluff, Arkansas. Medical degree: University of Tennessee, 1969. Specialty: Psychiatry.

STANLEY R. SAMMS, M.D. Office: 110 Irving Street, N.W. Born in Jamaica, West Indies. Medical degree: Howard University, 1968. Specialty: Internal Medicine.

## Student

GEORGETOWN UNIVERITY. *Freshmen*: Robert P. Foglia, William B. Foley, James Joseph Hill, Richard K. Rudy, Edward Schnipper, David Young. *Sophomores*: Edward J. Dill. *Juniors*: Kenneth R. Fox, Maureen O'Regan.

GEORGE WASHINGTON UNIVERSITY. *Freshmen*: Andrew M. Blumberg, Walter S. Falkowski, Terrence G. Furlow, Douglas Howard, Frederick Kass, III, Mervin Sakowitz, Peter Starke, Paul Taylor. *Sophomores*: Jesse S. Rosenthal, Timothy Wex. *Juniors*: Bruce J. Ammerman, Marc Karl Binder, Loren S. Funt, Robert L. Goldman, Julian Loube, Ronald Monteverde, Mark W. Surrey, David Winston.

# NATIONAL & REGIONAL MEETINGS

August 6–8: International Doctors in Alcoholics Anonymous Annual. Alexandria Bay, N. Y. Address: Dr. Lewis K. Reeds, Sec., 1950 Volney Rd., Youngstown, Ohio 44511.

August 15–18: International Symposium on Drug Tolerance, Addiction, Abuse, and Methadone Treatment, Sponsored by Zavier University of Louisiana, College of Pharmacy. New Orleans. Address: Dr. Jasbir M. Singh, Director of Symposium, Xavier University of Louisiana, 7325 Palmetto Street, New Orleans, Louisiana 70125.

August 23–26: American Hospital Association. Chicago. Address: Dr. Edwin L. Crosby, Exec. Vice-Pres., 840 N. Lake Shore Dr., Chicago. Illinois 60611.

**September 7–12: International Congress of Pharmaceutical Sciences, 31st, Sponsored by International Pharmaceutical Federation. Sheraton-Park Hotel, Washington, D.C. Address: Mr. George B. Griffenhagen, Sec., c/o American Pharmaceutical Association, 2155 Constitution Avenue, N.W., Washington, D.C. 20037.**

October 4–7: American Academy of Family Physicians. Miami Beach. Address: Mr. Mac F. Cahal, Exec. Dir., Volker Blvd. at Brookside, Kansas City, Missouri 64112.

October 13–14: American College of Preventive Medicine. Minneapolis. Address: Mr. Ward Bentley, Exec. Dir., 801 Old Lancaster Rd., Bryn Mawr, Pennsylvania 19010.

October 18–22: American College of Surgeons. Atlantic City. Address: Dr. C. Rollins Hanlon, Dir., 55 E. Erie St., Chicago, Illinois 60611.

October 22–30: College of American Pathologists. Boston. Address: Mr. Oliver J. Neibel, Jr., Exec. Dir., 230 N. Michigan Ave., Chicago, Illinois 60601.

October 24–28: American College of Chest Physicians. Philadelphia. Address: Dr. Alfred Soffer, Exec. Dir., 112 E. Chestnut St., Chicago, Illinois 60611.

October 24–30: American College of Gastroenterology. Atlanta. Address: Mr. Daniel Weiss, Exec. Dir., 299 Broadway, New York City, New York 10007.

**October 29–November 1: Association of American Medical Colleges, 10th Annual Conference on Research in Medical Education. Washington Hilton Hotel, Washington, D.C. Address: Dr. James B. Erdmann, Dir., 1 Dupont Circle, N.W., Washington, D.C. 20036.**

**We located our offices just off Farragut Square to better serve the professional* and personal insurance needs of doctors.**

Employees Workmen's Compensation • Bonds on Employees • Equipment Floater • Fire Insurance Contents • Business Expense Disability • Non-Cancellable Disability Income • Auto and Home Insurance

**As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*

# GENERAL NEWS

James L. Luke, M.D., a forensic pathologist at the University of Oklahoma Medical Center, has been appointed the **First Chief Medical Examiner** for the District of Columbia, to begin on July 19, 1971.

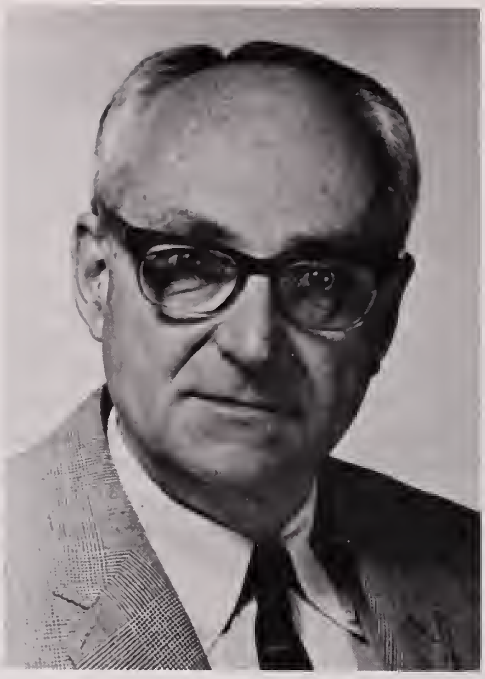
On February 1, the day the District of Columbia Crime Bill was enacted, the old District Coroner's office was renamed the Office of the Chief Medical Examiner and was transferred to the Department of Human Resources.

The panel which selected Dr. Luke consisted of Dr. Marion Mann, Dean of the Howard University College of Medicine; Dr. Abner Golden, Professor of Pathology, Georgetown University Medical Center; Dr. William J. Washington, Jr., associate director for hospitals and medical care program for the Department of Human Resources; and Dr. William Brownlee, deputy medical director.

The George Washington University Medical Center announces the appointment of four new chairmen of major clinical departments. The appointees are **Dr. William S. Yamamoto**, Department of Clinical Engineering; **Dr. Hugo U. Rizzoli**, Department of Neurological Surgery; **Dr. S. David Rockoff**, Department of Radiology; **Dr. Robert H. Parrott**, Department of Child Health and Development.

The reorganization of GW's Department of Pediatrics into the **Department of Child Health and Development** was announced in May. Dr. Parrott, who has been serving as Acting Chairman of Pediatrics, now directs both the Children's Hospital and the new department.

On April 22, 1971, the **Past Presidents Club of the Medical Society of the District of Columbia** met at the residence of Dr. W. Ross Morris for their Fourth Annual Social Gathering. The following were present: Past Presidents—W. Ross Morris, Herbert P. Ramsey, William P. Herbst, Ralph M. Caulk, Wallace M. Yater, Preston McLendon, A. Magruder MacDonald, Victor R. Alfaro, William M. Ballinger, Paul Wilner, Edward Nicklas, Spencer Dryden, Karl C. Corley, Frank Bacon, Raymond Holden, Donald Stubbs, Henry Ecker, William McCune, Frank S. Pellegrini. Also present were Marvin Korengold (President), Darrell Crain (President-Elect), Theodore Wiprud (former Executive Director), and F. P. Ferraraccio (Executive Director).



W. Proctor Harvey, M.D.

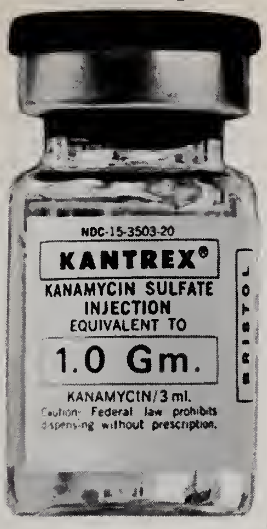
**W. Proctor Harvey, M.D.**, Professor of Medicine, was recently awarded the **"Golden Apple"** by students at the Georgetown University School of Medicine. The award was presented at the annual student-faculty dance and was based on a vote by the students of the outstanding faculty member in the clinical field. **Richard A. Gillis, Ph.D.**, was also the recipient of a **"Golden Apple"** selected by the students as the outstanding faculty member in the basic sciences.

**John Parks, M.D.**, Dean of the George Washington University Medical Center, was chosen **President-Elect of the American Gynecological Society** as its May meeting in Phoenix, Arizona.

Dean of the GW Medical School since 1957, Dr. Parks is a former president of the Association of American Colleges, the National Board of Medical Examiners, and the American Association of Obstetricians and Gynecologists. He is a Fellow in the Royal College of Obstetricians as well as a Governor of the American College of Surgeons.

**Robert W. McConnell, M.D.**, Chief of the Nuclear Radiology Division of the Department of Radiology at the St. Paul Hospital in Dallas, Texas, was elected **President of the American College of Radiology** at the College's 48th annual meeting held in St. Louis, Missouri.

# On formulary and in the pharmacy...



take advantage of the

**Kantrex®**
**KANAMYCIN SULFATE**

experience

## A dozen years of Kantrex usage have established its efficacy, its versatility, its simplicity.

## And its economy.

Faced with a life-threatening infection, the physician cannot conscionably consider economy a primary factor in selection of an appropriate antibiotic. However, when susceptibility reports are in, the infecting pathogens are often found to be susceptible to several antibiotics. The physician may then consider dose requirements and cost in his prescribing decision.

Kantrex requires one simple standardized dose for almost any patient with any susceptible mixed Gram-negative/staph infection (Pseudomonas are resistant). The usual adult daily dose of Kantrex is only 1.0 Gm.... and the usual total course of therapy, 7-10 Gm. Translated to dollars and cents, the daily cost of Kantrex therapy may be only 1/2 to 1/8 that of therapy with other parenteral antibiotics used for serious hospital infections.

Doesn't it make good sense to use Kantrex?

**Experience proves it does.**

---

EF SUMMARY OF PRESCRIBING INFORMATION
/8/70
complete information, consult Official Package Circular

**Warning:** Irreversible deafness can occur. Tinnitus or vertigo may also occur and indicate vestibular damage and impending deafness. The risk is sharply increased with renal dysfunction. In such cases, decrease size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. Watch carefully for ototoxicity in older patients and patients receiving more than 15 Gm. of kanamycin. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in post-operative patients until recovery from anesthesia and muscle relaxants is complete. Avoid concurrent use of other ototoxic drugs including ethacrynic acid. Safety in pregnancy is not established

**cations:** Serious infections due to susceptible strains of *E coli*, Proteus sp
*robacter aerogenes*, *K pneumoniae*, *Serratia* marcescens and *Mima-*
*ellea* Culture and sensitivity studies should be performed
**traindications:** A history of hypersensitivity to the drug Prior auditory dam-
by kanamycin or other agents may be a contraindication if effective alterna-
herapy is available
**autions:** Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules Assess renal function periodically, both before and during therapy If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary—in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy Mycotic or bacterial superinfection may occur.

**Adverse Reactions:** Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias

**Dosage and Administration:** The maximum total daily dose should not exceed 1.5 Gm by all routes of administration. The usual dose is 7 5 mg /Kg / 12 hours I M The average adult dose is 1 Gm daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours

If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials

**Supplied:** Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations. 0.5 Gm. in 2 ml and 1.0 Gm in 3 ml Also available—Pediatric Injection 75 mg in 2 ml.

**A.H.F.S. Category 8:12.28**

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

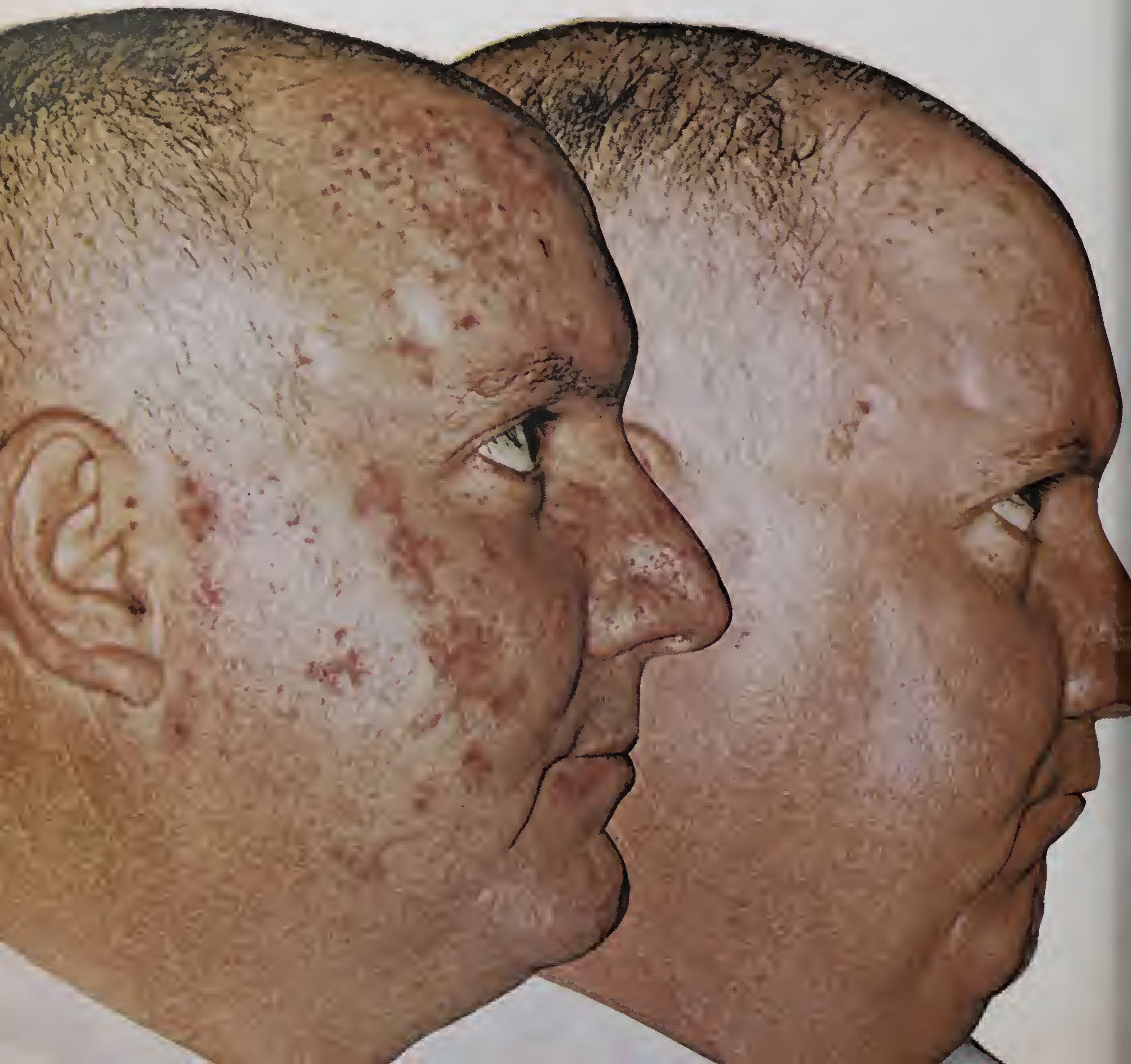
# Call it what you will, it may be premalignant.

**Before**

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

**After**

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

# nd Efudex® (fluorouracil) 5% cream can resolve it.

### l it actinic, solar or senile keratoses, ny regard it as "precancerous."[1,2]

cal fluorouracil, considered by some dermatologists to be a major nce in the treatment of multiple solar keratoses,[3,4] offers the physi- a relatively inexpensive alternative to cryosurgery, electrodesic- n and cold knife surgery. Of the topical fluorouracils available, only dex offers 2% and 5% solution and 5% cream formulations—formula- s that have proved effective in the treatment of these mutliple lesions.

### ıal duration of therapy, 2 to 4 weeks.

lies showed that with the 2% and 5% Efudex preparations, the usual tion of therapy was only 2 to 4 weeks.[5] Other studies with topical ouracil revealed that when concentrations of less than 2% were , significant numbers of lesions recurred.[6]

### eats the lesions you can't see, too.

erous lesions, not apparent prior to 2% and 5% Efudex therapy, ifested themselves by definite reactions, while intervening skin ained relatively unaffected.[5] The early eradication of these subclini- esions (which may otherwise have undergone further progression) ably accounts for the reduced incidence of future solar keratoses in ents treated with topical fluorouracil—especially with 5% entrations.[6]

### v to identify solar keratoses.

ically, the lesion—a flat or slightly elevated brown to red-brown ıle—is dry, rough, adherent and sharply defined. Multiple lesions the rule.

### edictable therapeutic response.

response to a typical course of Efudex therapy is usually acteristic and predictable. After 3 or 4 days of treatment, erythema ns to appear in the area of keratoses. This is followed by a moderate tense inflammatory response, scaling and occasionally moderate erness or pain. The height of this response generally occurs two s after the start of therapy and then begins to subside as treatment opped. Within two weeks of discontinuing medication, the mmation is usually gone. Lesions that do not respond should iopsied.

ences: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, e & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T., and Honeycutt, W. M.: tment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *maceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, 3. Belisario, J. C.: *Cutis*, 6:293, 1970. 4. Sams, W. M.: *Arch. Derm.*, 97:14, 1968. ta on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and E.: *Cancer*, 25:450, 1970.

**Before prescribing, please consult complete product information, a summary of which follows:**

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

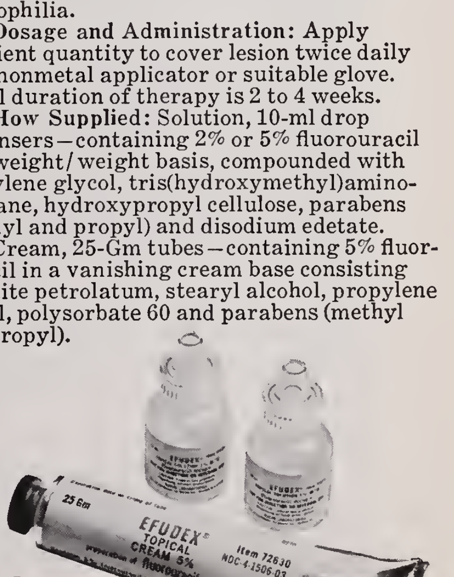
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



now

# Efudex®

(fluorouracil)
cream/solution

The **Georgetown University School of Medicine** has received more applications for admission to this fall's freshman class than any other school in the country. According to figures compiled by the American Medical College Application Service (AMCAS), the applications to Georgetown totaled 5,000. This is an increase of nearly 2,000 over last years figure, and it is also the **highest number of applications recorded by any medical school in history.**

On May 22, 1971, the **Marriage and Family Institute** opened its Walk-In Clinic which provides counseling and psychotherapeutic services to low income clients in the Washington metropolitan area. This is a community service, with fees on a sliding scale based on income and number of family members. There is a minimum fee of $5. The Clinic, under the direction of Mrs. Adele A. West, M.S.W., is located at 1500 Massachusetts Avenue, Suite 732, Washington, D.C. 20005, Phone 293-1444.

**Jack Kleh, M.D.** was re-elected **chairman of the board of Medical Service of D.C.** and Victor M. Brian was re-elected president of the Washington, D.C. area Blue Shield Plan during the Plan's annual election of officers.

All other Medical Service officers also were re-elected. They are Philip H. Philbin, M.D., vice chairman of the board; Frederick Dorn, personnel director for the Bureau of National Affairs, Inc., secretary; Douglas R. Smith, chairman of the board and president, National Savings and Trust Co., treasurer; David H. Link, Jr. and Dayton W. Selby, assistant secretaries; Charles G. Mackall, Jr. and J. Russell Bolton, both executive vice presidents of National Savings and Trust Co., assistant treasurers.

Two new trustees were elected to the board for three-year terms. They are George Speck, M.D., nominated by the Alexandria Medical Society and William J. Washington, Jr., M.D., nominated by the District of Columbia Department of Human Resources.

Re-elected as trustees, also for three-year terms, were Howard A. Donald, M.D.; Russell M. Tilley, Jr., M.D.; Leon R. Levitsky, M.D.; Frederick Dorn; Charles K. Stott; and Philip M. Talbott.

**Dr. William J. Washington,** director of medical care for the District of Columbia Department of Human Resources, has been named the **new administrator of D.C. General Hospital.**

**Lucille P. Ashley, R.N., M.S.N.,** has been appointed **director of continuing education for the Metropolitan Washington Regional Medical Program.**

As program director she will seek to improve the quality and capacity of health care delivery by coordinating the basic continuing education and training of nursing personnel. She will cooperate also with community agencies, organizations and institutions in planning, implementing and appraising programs of education and training for nurses in promoting the most effective utilization of talents and skills of currently available nurse power in the Metropolitan Washington area.

**John B. Johnson, M.D.,** Professor of Medicine and Director of the Cardiovascular Laboratory at the Howard University College of Medicine, has been elected **President of the Washington Heart Association.** Dr. Johnson is a Diplomate of the American Board of Internal Medicine, and holds Fellowships in both the American College of Physicians and the American College of Cardiology.

A new 24-hour telephone service has been initiated by the **Virginia Health Department Alcohol Clinic.** The Clinic, located at 200 Little Falls Street, Falls Church, is open weekdays from 8:30 a.m. closing Mondays at 9:30 p.m. and Tuesdays through Fridays at 4:30 p.m. Telephone 532-5575.

**Oscar B. Hunter, Jr., M.D.,** has been named chairman of a group of Georgetown medical alumni and friends serving on a 300 member, nationwide **fund-raising organization for the university.**

Dr. Hunter, a 1940 medical graduate of Georgetown, will be responsible for volunteer in the Washington metropolitan area.

The organization, known as the National Development Committee (NDC), was formed last fall to serve as the principal volunteer arm of a major long-range fund-raising effort by Georgetown. It is composed of alumni, parents and friends of Georgetown.

The **National Childrens Center** for the mentally retarded and handicapped has received a federal grant in the amount of $1.9 million to help expand the thirteen-year-old center. Construction of the quadrangle-shaped building is expected to begin within the year.

On July 1, **Cafritz Memorial Hospital** will begin a residency training program in orthopedic surgery with the **Howard University College of Medicine**. This is the first university affiliation for the eight-year-old hospital.

On June 8, the **Food and Drug Administration** gave pharmaceutical manufacturers 30 days to include the findings of a National Academy of Sciences–National Research Council study in the **advertising and labeling of prescription drugs**.

This order applies to prescription drugs introduced between 1938 and 1962, and comprises 80 percent of drugs now on the market.

On June 1, the Defense Department named **Everett G. Hopson**, a retired Air Force colonel, to coordinate its policies and programs for the serious problem of **drug abuse in the armed forces.**

At the Annual Dinner Meeting of the Medical Staff of Doctors Hospital on May 15, **Roy L. Sexton, M.D.** was honored for his 50 years of outstanding contributions and service to the Washington community and for his leadership in the development of Doctors Hospital and the Washington Medical Center.

On April 14, Group Hospitalization, Inc., and the Dental Health Service Corporation of D.C. (DHSC) have signed an agreement which will make a **prepaid dental care program** available to many Washington area residents in the coming months.

In announcing the agreement, Dr. Farver, President of GHI, stated "It is estimated that virtually everyone has some form of dental disease. We hope to fill this unmet need for dental care with our new prepaid program."

**Luther A. Robinson, M.D.**, Acting Superintendent of St. Elizabeth's Hospital and Director of its Mental Health program for the Deaf, received an Honorary Doctor of Science degree form Gallandet College at the College's 107th commencement exercises on May 17.

Dr. Robinson founded the psychiatric program for deaf patients at St. Elizabeth's, which integrates services, training, research and combined communication methods to provide comprehensive mental services to deaf patients.

## MEETINGS

The Georgetown University School of Medicine will hold their Sixth Postgraduate Seminar Cruise to the Caribbean on the luxurious M.S. EUROPA, sailing from New York on October 29, 1971 for 13 days. For information please contact Allen Travel Service, 565-5th Avenue, New York, New York 10017.

The 57th annual Clinical Congress of the American College of Surgeons will be held in Atlantic City, October 18-22. Over 13,000 doctors and guests from throughout the world are expected to attend. Headquarters will be the Dennis and Shelburne Hotels.

The Eighth Symposium on Family Psychotherapy will be held at the Georgetown University Medical Center on October 14 and 15. For further information please write to: Dr. Francis D. Andres, Department of Psychiatry, Georgetown University Medical Center, 3800 Reservoir Road, N.W., Washington, D.C. 20007.

**THE BALANCED RETIREMENT PLAN**

**A KEOGH ACT PROGRAM with a wide range of both guaranteed and equity investments. Pension and profit-sharing plans for professional corporations also available on a group basis.**

**Co-sponsored by the Medical Society of the District of Columbia**

**For information call or write--**

**Suter Associates Retirement Planning Company**

**2545 Wilson Blvd. Arlington, Virginia 22201**

***Telephone:* 525–6700**

Surgical Supplies and Equipment

*Complete Fitting Service for*
*Ladies and Men*

KLOMAN SURGICAL SUPPLY CO.
1028 19th Street, N.W.
Washington, D. C. 20036

*Telephone:* 223-3444

# ►DOCPAC BRIEFS

## DOCPAC?

DOCPAC is now 10 years old. In spite of this I am frequently asked by many physicians who should know better, "What is DOCPAC?" DOCPAC is the District of Columbia Political Action Committee, a component part of the American Medical Political Action Committee which is respected by politicians in both major parties as a highly professional and very effective organization involved in the election to Congress and to the Senate as well as to State Legislatures, of candidates whose views on medical matters are in basic agreement with those of most of the practicing physicians of this country. In the 1970 campaigns for example, AMPAC was involved in 215 contests, all of which were judged to be reasonably close. In 75% of these contests, our candidate was elected. It should not be necessary to point out to practicing physicians the overwhelming importance of legislation to them personally and to their life's work. The legislation which has been and will be passed is a direct result of the candidates who have been and will be elected. If you have a concern and wish to make your voice heard, you can do it more effectively by joining DOCPAC and AMPAC then in any other way. In unity there is strength. Why not stop complaining and start doing something about it? Why not sit down today and send a check for from $30.00 to $99.00 to DOCPAC for a family membership. In future reports we will be giving you more details on the activities currently in progress in the Greater Washington Area.

KARL C. JONAS, M.D.
*Chairman–DOCPAC*

# ►BOOKS RECEIVED

**Handbook of Pediatrics**, 9th edition. HENRY K. SILVER, M.D., C. HENRY KEMPE, M.D., AND HENRY B. BRUYN, M.D. Price, $6.50 (paper). Pp. 713 with illustrations. Los Altos, California: Lange Medical Publications, 1971.

**Handbook of Obstetrics and Gynecology**, 4th edition. RALPH C. BENSON, M.D. Price, $6.50 (paper). Pp. 774 with illustrations. Los Altos, California: Lange Medical Publications, 1971.

**Medical Parasitology**. J. WALTER BECK, PH.D. AND ELIZABETH BARRETT-CONNER, M.D., D.C.M.T. Price, $10.75. Pp. 210 with 150 illustrations. St. Louis: C.V. Mosby Company, 1971.

**Symposium on Strabismus**, Transactions of the New Orleans Academy of Ophthalmology. HERMAN M. BURIAN, M.D., EDWARD A. DUNLAP, M.D., JOHN A. DYER, M.D., MARY C. FLETCHER, M.D., ARTHUR JAMPOLSKY, M.D., PHILIP KNAPP, M.D., AND MARSHALL M. PARKS, M.D. Price, $34.50. Pp. 426 with 254 illustrations. St. Louis: C.V. Mosby Company, 1971.

**Obstetrics and Gynecology**, 4th edition. J. ROBERT WILLSON, M.D., CLAYTON T. BEECHAM, M.D. AND ELSIE REID CARRINGTON, M.D. Price, $19.80. Pp. 638 with 525 illustrations. St. Louis: C.V. Mosby Company, 1971.

**Campbell's Operative Orthopaedics**, Volumes 1 and 2, 5th edition. A. H. CRENSHAW, M.D., editor. Price, $79.50. Pp. 2044, with 3472 illustrations and 2 color plates. St. Louis: C.V. Mosby Company, 1971.

**The Arthritis Handbook: A Patient's Manual on Arthritis, Rheumatism and Gout**, 2nd edition, revised. DARRELL C. CRAIN, M.D., F.A.C.P. Price, $6.50. Pp. 220 with illustrations. New York: Exposition Press, 1971.

**Speech Pathology**: An Applied Behavioral Science. WILLIAM H. PERKINS, Ph.D. Price, $11.75. Pp. 449 with illustrations. St. Louis: C.V. Mosby Company, 1971.

**The Hand**. LEE MILFORD, M.D. Pp. 282 with 308 illustrations and 1 color plate. St. Louis: C.V. Mosby Company, 1971.

# OBITUARIES

## George W. Hoover, M.D.
## (1917 - 1971)

Dr. George William Hoover, a retired physician with the D.C. Welfare Department, died May 2, 1971. He lived at 3700 Woodbine Street, Chevy Chase, Maryland.

He was born in Chicago, Illinois on September 11, 1917. He received his undergraduate degree from George Washington University in 1940 and his medical degree from the George Washington University Medical School in 1944. He did both his internship and residency at George Washington University Hospital from 1944-1946. He also earned a master's degree in public health from the University of North Carolina in 1963.

He served with the Army as Assistant Chief of Dermatology at Walter Reed General Hospital from 1946-1948.

Dr. Hoover practiced medicine here from 1948-1954. He then moved to Fort Lauderdale, Florida where he was the director of Dade County Nursing Homes and Hospitals from 1964 until 1967. He returned to the District in 1968 and joined the medical staff at D. C. Village, the city institution for the elderly. He retired last year.

He is survived by his wife, Helen of the home address; three sons, Patrick J. of Flint, Michigan, William and John, both of the home, a daughter, Anne Georgia, of Rochester, New York and a sister, Virginia Thompson of Flint, Michigan.

## Edward A. Krause, M.D.
## (1898 - 1971)

Dr. Edward A. Krause, a retired Washington physician died April 30, 1971. He lived at 4644 S.E. First Place, Cape Coral, Florida.

Born in Bison, Kansas on December 27, 1898, he attended the Emerson Institute in Washington, D. C. He received his A.B. degree from George Washington University and his medical degree from the George Washington University Medical School in 1927. He interned at Garfield and Emergency Hospitals in Washington, D. C. from 1927-1929.

During World War II, Dr. Krause served as Lt. Col. in the U. S. Army Medical Corps. He was the Executive Officer and Chief of Medical Service at Fort Story, Virginia Station Hospital and Camp Pickett, Virginia Station Hospital as well as serving as Commanding Officer of the 114th Station Hospital during the North African Campaign.

Dr. Krause retired from active practice of medicine in June, 1964.

RMK
*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

***PROFESSIONAL LIABILITY**

**OFFICE PUBLIC LIABILITY**

**LOW COST TERM LIFE INSURANCE**

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

*Classified advertisements of a professional nature are free to members.*

## PHYSICIANS WANTED

HOUSE OFFICERS WANTED: Medicine and Ob/Gyn. 350 bed community hospital in suburban D.C. E.C.F.M.G. and Permanent or Immigrant Visa required. Inquire: Medical Staff Office, Holy Cross Hospital of Silver Spring, 1500 Forest Glen Road, Silver Spring, Maryland 20910.

## SERVICES

MAKE YOUR WILL. Why delay? Receive 4 Will Forms and a 64-page booklet, "WILLS—How To Make and How To Break Them", written by an attorney. Just send $1.50 to Legal Forms Company, Dept. 529, 1830 Guardian Building, Detroit, Michigan 48226. (Satisfaction guaranteed.)

## REAL ESTATE

FOR SALE OR RENT: Henlopen Avenue, Rehoboth Beach. 4 bedrooms, 2 baths, never rented before. Air conditioned, all electric, all appliances, all conveniences for family. Contact Dr. D. Starr, (202) Ad2-2696.

FOR SALE: Modern Residence and Separate Offices. 18,000 sq. ft. located on Wisconsin Avenue in Bethesda. Luxury custom offices of over 1,400 sq. ft. Unlimited parking, low cash required. Call Mrs. Heller, Colquitt-Carruthers, Inc., (301) 652-0001.

FOR SALE: Convalescent homesite of approx. two acres, park-like grounds in Southeast Washington near three hospitals, bus stop. Can accommodate 100 beds. For further information, write Dr. Reuben Sorkin, 4721 University Drive, Coral Gables, Florida 33146.

## OFFICE SPACE AVAILABLE

FOR RENT: 1300 sq. ft. in Medical Arts Bldg., 3611 Branch Ave., Hillcrest Heights, Maryland. Modern, air-conditioned, elevator, parking. 4th floor. Rent includes utilities and janitorial service. Call Mr. Cardarelli, (301) 735-7892.

FOR RENT: Office for 2 doctors, 5323 Connecticut Avenue, N.W. 3 examining rooms, 1 lab., 1 x-ray, and 1 waiting room. Contact Resident-manager, Mr. Adams, (202) 362-7847.

FOR RENT: 1726 Eye Street, N.W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298-6936.

TO SHARE: Office space Silver Spring, busy section University Blvd., West. Convenient to hospitals. Fully equipped Internist's office with Chem. Lab, X-Ray, EKG, phone lines, sec'y on duty. Happy to show, discuss any timing arrangements, etc. agreeable to both. Might be good second location for one or two interested doctors. Call Dr. Datlow, (301) 593-6010.

---

**KALORAMA CONVALESCENT HOME, INC.**

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE

for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

---

**MAXWELL AND TENNYSON INC.**

M&T

*Pharmacists*

916 19th. St. N.W., Washington, D.C.

"WHERE PHARMACY IS A PROFESSION"

BIOLOGICALS • VACCINES • SERUMS •
HYPO-ALLERGENIC COSMETICS •
ORTHOPEDIC APPLIANCES AND GARMENTS
(QUALIFIED FITTERS)
INHALATION THERAPY AND
ELECTRIC AIR PURIFIERS
(QUALIFIED INHALATION THERAPIST)

**CONVALESCENT AIDS**

AVAILABLE FOR RENTAL OR SALE

**Phone 223-4711 or 223-9797/8**

HOURS: 8 am to 7 pm—Mon. Thru Fri.—Sat. 8 am to 2 pm
CLOSED Sunday and Holidays

**HEALTH AUTO-DATA, INC.**
4900 Massachusetts Avenue, N.W.
Washington, D.C. 20016
(202) 966–4300

*Serving the Physician*
*and the Community*

Health Auto-Data, Inc. (HAD), is organized to provide services to physicians to assist them in their daily routines.

Overhead cost may be reduced by having routine work done at the HAD facility.

We prepare a "patient profile" which may save a considerable amount of time. By having selected tests performed and a medical history taken prior to the physician's initial consultation with the patient, the physician finds it easier and less time-consuming to review the patient's history and analyze the test results.

The medical history is self-administered by patients utilizing an automated console. It passively teaches the patient how to report to a physician, again resulting in a time saving for the physician.

Several semi-automated physiological and laboratory tests are performed.

The entire patient-testing procedure only lasts about an hour and a half! HAD does not interpret the tests. HAD concentrates on the efficient and low-cost performance of routine tests.

The computer-printed reports - - with annotations by the patient's physician - - can serve as records to enclose when making referrals. The records with added diagnosis and recommendations can provide a full report when admitting a patient to a hospital. With progress notes regarding hospital treatment and disposition, the material provides the basis for a hospital summary.

Appointments for patients may be made at the patients' convenience. Call 966–4300 for further information or clip out this form and mail to:

HEALTH AUTO–DATA, INC.
4900 MASSACHUSETTS AVENUE, N.W.
WASHINGTON, D.C. 20016

FROM: DR. ____________________

STREET ADDRESS ____________________

CITY ____________________ STATE __________

ZIP CODE ____________________

TELEPHONE NUMBER ____________________

☐ SEND LISTING OF SERVICES AND FEES
☐ HAVE A REPRESENTATIVE CALL FOR APPOINTMENT TO EXPLAIN SERVICES
☐ I AM INTERESTED IN A FIRST-HAND INSPECTION OF HAD - - CALL ME TO ARRANGE A VISIT
☐ I AM INTERESTED IN BEING PROCESSED THROUGH HAD FACILITY - - CALL ME TO ARRANGE AN APPOINTMENT SO I CAN INCLUDE YOUR SERIES OF TESTS IN MY ANNUAL PHYSICAL EXAMINATION. I UNDERSTAND THIS IS COMPLIMENTARY

# INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

Page

**Automated Medical Service**
  Health Auto-Data, Inc. .......... 7

**Bank**
  National Bank of Washington .......... 2

**Business Counseling**
  Data Medics .......... T-477

**Diatetic Products**
  Campbell Soup Company .......... T-445

**Insurance**
  McDermott Insurance, Inc. .......... T-479
  Mutual of Omaha .......... 3C
  Russell, Marsh & Kennedy .......... T-487

**Equipment and Supplies**
  Kloman Surgical Supply Company .......... T-486

**Investment Planning**
  Suter Associates Retirement Planning Company .......... T-485

**T-text**

Page

**Nurse Registries**
  Association of Undergraduate and Practical Nurse Registry .......... 8
  District of Columbia Manpower Administration .......... 8

**Pharmaceuticals**
  Arch Laboratories .......... T-466
  Bristol Laboratories .......... T-481
  Burroughs-Wellcome .......... T-469
  Dow Chemical Company .......... T-472–473
  Geigy Pharmaceuticals .......... 4
  Eli Lilly & Company .......... 6
  National Drug Company .......... T-467–468, 9–10
  A. H. Robins .......... T-470–471
  Roche Laboratories .......... 2C-1, T-482–483, 4C
  G. D. Searle .......... T-446–447
  E. R. Squibb & Sons
  Stuart Pharmaceuticals .......... T-448
  The Upjohn Company .......... T-453–454
  USV Pharmaceuticals .......... T-450–451

**Pharmacies**
  Maxwell & Tennyson .......... T-488
  Peoples Drug Stores .......... T-475

**Sanitariums**
  Kalorama Convalescent Home .......... T-488

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659–8040
Monday–Friday
8:30 a.m.–4:00 p.m.

NURSES REGISTRY
LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

# The girth control pill

# Tepanil® Ten-tab®

(continuous release form)

**(diethylpropion hydrochloride, N.F.)**

Vhen girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat ess. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

**Contraindications:** Concurrently with MAO inhibitors, in patients hypersensitive to his drug; in emotionally unstable patients susceptible to drug abuse.

**Varning:** Although generally safer than the amphetamines, use with great caution in atients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

**Adverse Reactions:** Rarely severe enough to require discontinuation of therapy, unleasant symptoms with diethylpropion hydrochloride have been reported to occur n relatively low incidence. As is characteristic of sympathomimetic agents, it may ccasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precardial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-107/4/71/U S PATENT NO 3 001,910

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

**Painful night leg cramps...**

unwelcome bedfellow for any patient–including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

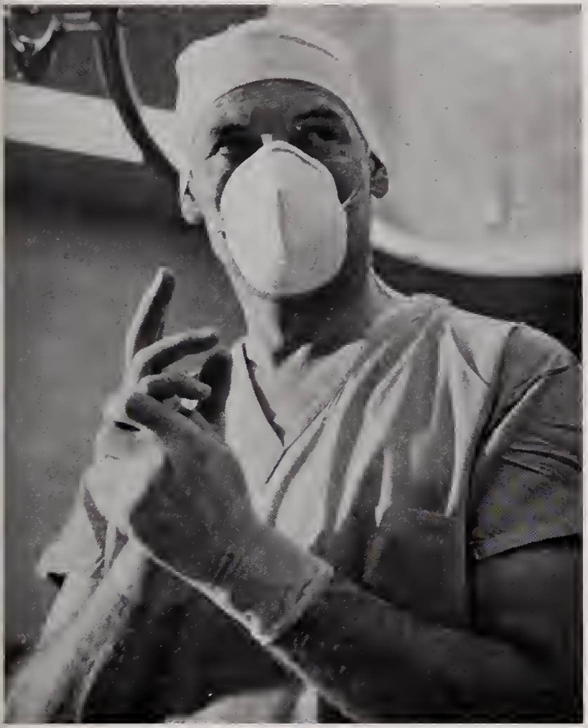
**Prescribing Information—Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**

**Quinamm**™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)

# Make Sure You Have Cash To Live On When You're Disabled!

Even doctors get sick and hurt! When your turn comes and you can't continue your practice, will you still be able to provide for yourself and your family—pay for food, clothing, your home, the everyday living expenses, plus extra medical bills?



You can have this financial security with the Disability Income Protection Plan available to members of the Medical Society of the District of Columbia.

PAYS UP TO $225.00 A WEEK
when you're sick or hurt
and can't practice!

*Check these other important features of this plan:*

- Benefits are TAX-FREE, for you to use as you see fit.
- Confinement is never required during disability.
- Benefits are payable regardless of other coverage.
- There is no automatic age termination.
- Your policy is guaranteed renewable while the program remains in force regardless of benefits paid to you or any future changes in health.
- Premiums are low, due to the mass purchasing power of your Society.
- There are few exceptions. Your policy does not cover: suicide or attempted suicide; loss during a declared or undeclared war or while a member of an armed service; loss due to noncommercial flying; costs of childbirth, pregnancy or any complication.

Fill out the coupon below and mail it today! You'll receive complete information on this outstanding Disability Income Protection Plan available to you as a member of the Medical Society of the District of Columbia. Don't delay!

JOSEPH E. JONES, Administrator
1666 Connecticut Avenue, N.W.
Washington, D.C. 20009 Phone: (202) 483-3100

Please rush to me complete information on the Disability Income Protection Plan available to me as a member of the Medical Society of the District of Columbia!

Name______________________________

Address______________________________

City____________State________ZIP Code_____

Underwritten by

**Mutual of Omaha**®

*The Company that pays*

Life Insurance Affiliate: United of Omaha

MUTUAL OF OMAHA INSURANCE COMPANY
HOME OFFICE: OMAHA, NEBRASKA

# anxiety: a time bomb

Unless "defused," anxiety may build up to an intensity that can overwhelm the patient's inner defenses. Also, in one weakened by chronic illnes or surgery, excessive anxiety may provoke or aggravate symptoms and interfere with recovery.

The antianxiety action of Librium (chlordiazepoxide HCl)—used adjunctivel or alone—has demonstrated clinical usefulness in many fields of medical practice where anxiety complicates the patient's condition.

antianxiety

# Librium®

## (chlordiazepoxide HCl)

## 5-mg, 10-mg, 25-mg capsules up to 100 mg daily for severe anxiety

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has no been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by prope dosage adjustment, but are also occasionally observed at the lower dosage ranges In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, mino menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG pattern (low-voltage fast activity) may appea during and after treatment; blood dyscrasias (including agranulocytosis), jaundic and hepatic dysfunction have been reported occasionally, making periodi blood counts and liver function tests advisable during protracted therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Ir
Nutley, N.J. 07110

*Volume 40 · Number 8 · August 1971*

# MEDICAL ANNALS of the District of Columbia

THE MEDICAL SOCIETY
of the
DISTRICT OF COLUMBIA

Library, Harvard Medical School Lib.
25 Shattuck St.
Boston, Mass. 02115

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
18 OCT 1971

**Use of Chemotherapy in Lung Cancer**
BRUCE I. SHNIDER, M.D.

**Medical Genetics**
VERLE E. HEADINGS, M.D., PH.D. AND ROBERT F. MURRAY, M.D., M.S.

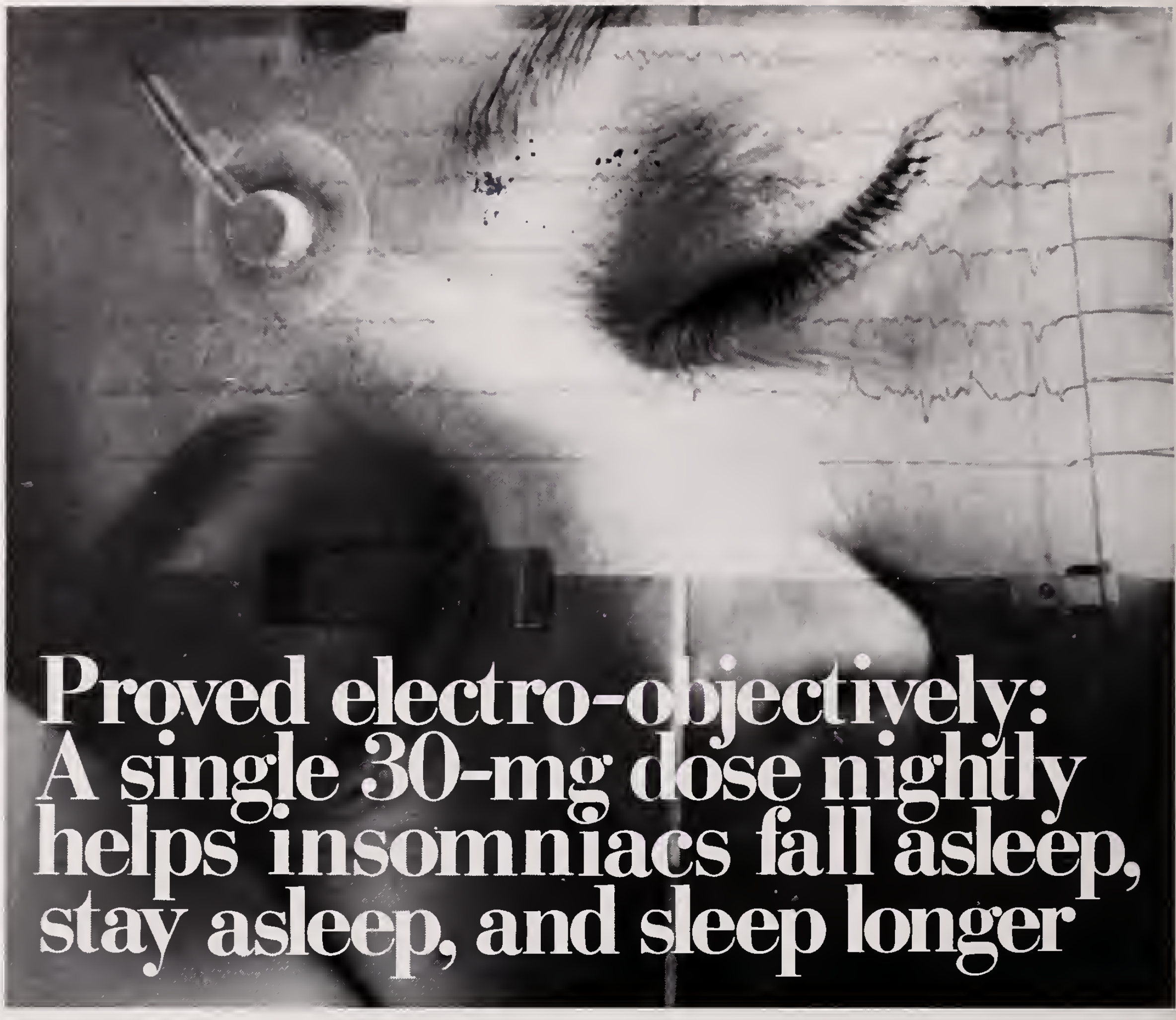
**Photosensitivity Caused by Oral Contraceptives**
MERVYN L. ELGART, M.D. AND ROBERT S. HIGDON, M.D.

**Auscultation in Acquired Heart Disease**
JOSEPH K. PERLOFF, M.D.

**Sex Education in the Public Schools**
LARRY B. SILVER, M.D.

Hoistway looms in the foreground as the walls of the world's largest intensive care wing rise at the Washington Hospital Center. Completion is scheduled for the 74 bed wing in Spring 1972.

*Annual Scientific Assembly*
THE STATLER HILTON HOTEL
September 23 & 24, 1971



# Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

**Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]**

**Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.**

## Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

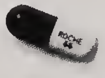
THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
19 OCT [illegible]

## Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.[3] Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

**References: 1.** Kales, A., *et al.*: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. **2.** Kales, A., *et al.*: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed.): *Sleep: Physiology and Pathology,* Phila., Lippincott, 1969, p. 331. **3.** Data on file, Medical Department, Hoffmann-La Roche Inc.

Rx
Dalmane 30 mg
#30
Sig: 1 cap h.s.



For the sleep your patients need

# New Dalmane®
(flurazepam hydrochloride)

**Before prescribing, please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

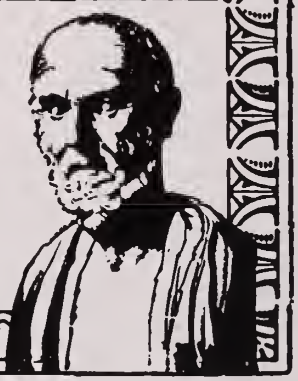
**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

"Healing is a matter of time,
but sometimes also of
opportunity."

Hippocrates, *Precepts*, Chapt. I



**and so is money-management**

After an initial exploratory examination of your finances by The National Bank of Washington, we can prescribe a course of action that will ensure your fiscal health through good times and bad.

Do you want to prepare for your family's security? There are all kinds of trusts and investments that can be established to suit your particular wants and needs.

Do you want to start a college trust fund to provide for your children's education at a time in your life when you might want to slow down? Our Trust Department knows just how to help you to do this.

How much should you invest in stocks and bonds? Our Investment Department won't give you a rule-of-thumb, but it will give you a plan as individual as you are.

Is the chore of day-to-day banking taking too much of your time or the time of your professional staff? Our bank provides you with prepaid, self-addressed envelopes that allow you to handle your checking or savings accounts right at your desk—at no cost to you.

Are you tired of paying monthly service charges on your checking account? At The National Bank of Washington, if you maintain a minimum balance of $300 in your regular personal checking account, there are no service charges.

Do you want to buy some special professional equipment, attend an international medical meeting overseas, buy another car or boat? At The National Bank of Washington you can get a consumer loan for a mere 8% annual percentage rate.

For *any* questions on money management, consult The National Bank of Washington. Twenty convenient locations. Main office: 14th and G Streets, N.W. 624-3000. Member FDIC.

The National
**BANK OF
WASHINGTON**

VOLUME 40 • AUGUST 1971

**EDITOR**

Wallace M. Yater, M.D.

**ASSOCIATE EDITOR**

Raymond Scalettar, M.D.

**ASSISTANT EDITOR**

Judith E. Perruso

**MANAGING EDITOR**

Francisco P. Ferraraccio

**EDITORIAL BOARD**

Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**

Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Leslie E. Hedgepath, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

MEDICAL
ANNALS
of the
DISTRICT OF
COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

OU-7D19

Who's afraid of the
big bad enema?

**We all are.** But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can – except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents" and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

**Dulcolax®...it's predictable**
bisacodyl

GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 UNDER LICENSE FROM BOEHRINGER INGELHEIM G. M. B. H.

# MEDICAL ANNALS of the District of Columbia

## *Contents for August*

### SCIENTIFIC ARTICLES

The Use of Chemotherapy in Lung Cancer (Controlled Trials). *Bruce I. Shnider, M.D.,* Silver Spring, Maryland 489

Medical Genetics: An Esoteric Science or an Aid to Patient Care? *Verle E. Headings, M.D., Ph.D.,* and *Robert F. Murray, M.D., M.S.,* Washington 496

Photosensitivity Caused by Oral Contraceptives. *Mervyn L. Elgart, M.D.* and *Robert S. Higdon, M.D.,* Washington 501

Highlights of Auscultation in Acquired Heart Disease. *Joseph K. Perloff, M.D.,* Washington 504

Sex Education in the Public Schools: Is the Question Really Yea or Nay? *Larry B. Silver, M.D.,* Washington 506

### SPECIAL SECTIONS

History of the Medical Society of the District of Columbia. Chapter XV. *Theodore Wiprud* 511

1971 Scientific Assembly Official Program 541

### EDITORIAL

Veteran Heroin Addicts in Washington: A Preliminary Report. *Robert L. DuPont, M.D.* 521

### MISCELLANY

President's Page: "Come Ye Let Us Gather . . ." 519

D.C. Health Notes: Venereal Disease in the District of Columbia 524

New Associate Editor Named 525

D.C. Mental Health Administration: Suicide Prevention in the Nation's Capitol. 526

Summary of Executive Board Actions 537

New Members 540

Woman's Auxiliary Notes 545

Meetings 545

General News 545

Book Reviews 553

Obituaries 565

DOCPAC Briefs 566

*Classified Advertisements* *Adv. 7*

*Medical Annals Staff and Officers of the Medical Society* *Adv. 3*

*Index of Advertisers* *Adv. 8*

---

Copyright ©, 1971 by The Medical Society of the District of Columbia. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

Now
available for your
prescribing
needs

Cordran® Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206
000121

Lilly

MEDICAL ANNALS
of the District of Columbia

August 1971
VOLUME 40 • NUMBER 8

# The Use of Chemotherapy in Lung Cancer (Controlled Trials)

BRUCE I. SHNIDER, M.D.*†‡

IN 1955 UNDER THE sponsorship of the Cancer Chemotherapy National Service Center of the National Cancer Institute, a group of internists interested in studying methods of cancer chemotherapy in man joined together to form the Eastern Coöperative Cancer Chemotherapy Group. The members of the group undertook as one of their first tasks a critical examination of the methodology of clinical cancer chemotherapy trials.[1] It was their hope that the introduction of controlled clinical studies would permit an understanding of what was required for quantitative comparisons between the effectiveness of various anticancer drugs then in use. These investigations were modeled in part on concurrent experience gained in similar studies that were already in progress in acute leukemia. The group developed the following objectives: 1) To study the feasibility and usefulness of collaborative clinical research in cancer chemotherapy. This type of collaboration could permit more rapid evaluation of new drugs by enabling the new investigators to pool their experience, set up common criteria for response and toxicity, and develop broader generalizations from the ensuing results than would be possible if 1 investigator were conducting the study; 2) to apply the principles of controlled therapeutic trials to clinical cancer chemotherapy and provide reliable data on the role of various drugs in the treatment of cancer. This was essential in view of the fact that many of the drugs in use were toxic and the physician was constantly required to balance the therapeutic efficacy against toxicity. Through these principles the group hoped to avoid the pitfall of widely varying claims made by different clinicians about the usefulness of any given drug because of differences in criteria and frames of reference; 3) to establish useful quantitative measures for antitumor effects in human solid tumors and the quantification of drug effect upon animal and human tumors in order to better determine the predictability value of studies in animals.

Since its inception the Eastern Coöperative Cancer Chemotherapy Group (now the Eastern Coöperative Oncology Group) has conducted a total of 130 clinical trials. Thirty-nine of these have been in the form of preliminary evaluations of new cancer chemotherapeutic compounds in their first clinical pharmacological studies in man. Forty-two Phase I evaluations of new agents have been conducted. Twenty-seven Phase II studies and 22 controlled Phase III trials have been undertaken. This presentation will summarize those major clinical trials that are related to the evaluation of the effectiveness of chemotherapeutic agents with or without X-ray therapy in bronchogenic cancer.

The data reported represent the combined efforts of 16 senior investigators and 107 additional physicians from the 16 institutions which since 1957 have been or are now members of the Eastern Coöperative Oncology Group. I am indebted to my many colleagues for their generosity in allowing me to report this compilation of our combined efforts.

## Trial 1

Our first controlled trial involved a comparison of the effectiveness of 2 alkylating agents, triethylene thiophosphoramide (TSPA, thio-TEPA) and methyl-bis($\beta$-chloroethyl)amine ($HN_2$, mechlorethamine, nitrogen mustard).[2,3] One of the major components of this trial included an evaluation of these agents in carcinoma of the lung. Patients who had inoperable primary or metastatic epidermoid carcinoma of the lung were selected for study and randomized between the 2 drug therapies. Objective measurement of tumor size and survival time was used as an endpoint of drug effect. Concurrent controls were utilized and a final determination of drug effect by all coöperating investigators was made without the prejudicial knowledge of which drugs the patients had received. Specified doses of drugs were administered for standard periods of time for all patients in order to avoid as much as possible differences in drug dosage.

---

*Professor of Medicine and Pharmacology, Director Division of Medical Oncology, Department of Medicine, Georgetown University School of Medicine, 3900 Reservoir Road, N.W., Washington, D.C.

†Studies of the Eastern Coöperative Oncology Group, 1957-1969, (Chairman, Bruce I. Schnider, M.D.). This report supported by Public Health Service Grants from the National Cancer Institute (CA 02824-14 and CA 08119-3).

‡Presented at the Tenovus Symposium, July 16-20, 1969, Welsh National School of Medicine, Sully Hospital, Cardiff, Wales.

The data were collected on individual patients on standardized flow sheets. A data file on each patient was sent to the statistician for evaluation, as well as to the coöperating investigators. Reproductions did not show which drug had been given. The criteria used in the evaluation of drug effects involved change in tumor size, major untoward effects, beneficial effects, survival time, and changes in the number of metastases. A total of 325 cases of carcinoma of the lung were evaluated, but only 118 were considered suitable for study. One hundred and ninety-three patients were rejected because the tumors were not measurable, prior treatment had been received, other treatment was indicated, the disease had not been confirmed histologically, or the patients were moribund before the studies could be undertaken. Eighty-nine patients had received no prior X-ray therapy, and 29 patients had received prior X-ray therapy before being included in the study (tables 1-4). More patients receiving nitrogen mustard had antitumor response than those receiving thio-TEPA. The mean duration of the tumor response was 65 ± 19 days in the patients responding to thio-TEPA, and 50 ± 8.5 days in the patients responding to nitrogen mustard. Neither of the differences was significant at the 0.05 level. The number of responders in the prior irradiated group was small, and there was no significant difference between the 2 drugs. This study established to the satisfaction of the investigators that collaborative research in cancer chemotherapy seemed the most feasible mechanism for the rapid and accurate clinical evaluation of new drugs shown to have antitumor activity in experimental systems. It further established that larger numbers of suitable patients could be obtained by collaborative coöperative trials,

**TABLE 1:** ***Trial #1:*** **Comparative Therapeutic Trial of Nitrogen Mustard and Triethylene Thiophosphoramide.**

| Category | Number of cases |
|---|---|
| No Prior X-ray ℞ | 89 |
| Prior X-ray ℞ | 29 |
| Total | |

**TABLE 2:** ***Trial #1:*** **Comparative Therapeutic Trial of Nitrogen Mustard and Triethylene Thiophosphoramide.**

Patient Characteristics

| Category | Drug | Number | Male | Female | Median age | Performance status |
|---|---|---|---|---|---|---|
| No Prior X-ray | TSPA | 43 | 41 | 2 | 58 | 2.1 |
| | $HN_2$ | 46 | 44 | 2 | 60 | 1.9 |
| Prior X-ray | TSPA | 14 | 14 | 0 | 56 | 2.0 |
| | $HN_2$ | 15 | 14 | 1 | 60 | 1.9 |

**TABLE 3:** ***Trial #1:*** **Comparative Therapeutic Trial of Nitrogen Mustard and Triethylene Thiophosphoramide.**

Duration of Disease from Diagnosis to Therapy

| Category | | Mean (months) | 95% Confidence Limits |
|---|---|---|---|
| No Prior X-ray | TSPA | 1.5 | 1.2 - 1.9 |
| | $HN_2$ | 1.5 | 1.1 - 2.0 |
| Prior X-ray | TSPA | 6.5 | 4.2 - 10.1 |
| | $HN_2$ | 5.2 | 3.0 - 6.9 |

**TABLE 4:** ***Trial #1:*** **Comparative Therapeutic Trial of Nitrogen Mustard and Triethylene Thiophosphoramide.**

Response Data

| Category | Drug | No. of Responders and Percent | Mean Duration (days) | Mean Reduction In Size |
|---|---|---|---|---|
| No Prior X-ray ℞ | TSPA | 4/43 = 10% N.S.D. | 6 ± 19 N.S.D. | 50 ± 10% N.S.D. |
| | $HN_2$ | 12/45 = 26% | 50 ± 8.5 | 39 ± 8% |
| Prior X-ray ℞ | TSPA | 2/14 | No difference | |
| | $HN_2$ | 2/15 | | |

that the effects of drugs upon tumors could be expressed somewhat quantitatively, and that the endpoint of drug effect could be established in a reasonably objective manner so that bias could be eliminated from the judgment of effect.

### Trial 2

A preliminary trial comparing supervoltage therapy to nitrogen mustard therapy in patients with inoperable cancer of the lung by one of our members suggested that radiotherapy was superior to nitrogen mustard (mechlorethamine, $HN_2$) therapy in causing transient shrinkage of the pulmonary tumor, although survival was unaffected.[4,5]

A study was undertaken to determine the therapeutic efficacy of 3 treatment schedules: irradiation therapy alone, a combination of radiation therapy and mechlorethamine therapy simultaneously, and mechlorethamine followed by radiotherapy. The study was designed to provide the answers to the following questions: 1) Was early radiotherapy repeatedly superior to early mechlorethamine therapy in causing shrinkage of lung cancer? 2) did the simultaneous or prior administration of mechlorethamine with radiation therapy enhance the shrinkage of tumor masses?, and 3) did mechlorethamine therapy in any way affect overt and occult metastases with a resulting increase in survival time?[6]

Two hundred and nineteen patients were treated from 1958 to early 1961. One hundred and ninety-six had received no prior therapy, and 23 had received varying doses of X-ray and alkylating agents. Patients were subdivided into 3 groups depending upon whether or not they had received prior X-ray therapy, chemotherapy, or no previous treatment.

In the radiotherapy group, half of the participating institutions utilized supervoltage (2 MEV) radiation therapy. An approximate daily tissue dose of 200 rads were administered in the midplane of the chest 5 days a week for 4 weeks for a total of 20 treatments for a total tissue dose of 4,000 rads. In the simultaneous mechlorethamine and radiation therapy group, patients received 0.1 mg of mechlorethamine per kg of body weight on the first 4 nights following the start of daily radiation therapy. After a 2-week period during which the patients were given their daily radiation therapy treatments in the same manner as outlined for the previous group, 0.1 mg of mechlorethamine per kg was given once a week for 4 additional weeks. In the third group, patients receiving mechlorethamine treatment followed by radiation therapy, 0.2 mg of $HN_2$ per kg of body weight was given on the first and third day of the study followed by a 2-week interval, during which no therapy was given. Then 0.1 mg per kg of $HN_2$ was given once a week for 4 weeks. Dosage was modified with the occurrence of leukopenia and thrombocytopenia in both groups. A total of 415 patients were considered for the study (tables 5-6).

**TABLE 5:** *Trial #2:* **Comparative Trial of Chemotherapy and Radiotherapy in Patients with Non-Resectable Cancer of the Lung.** *Trial #3:* **Clinical Pharmacologic Study of Chemotherapy and X-ray Therapy in Lung Cancer. Criteria for Admission of Patients**

1. Proven inoperable disease.
2. Estimated survival of 3 or more months.
3. Demonstrable measurable pulmonary lesions on X-ray films.
4. No prior therapy with the agents to be tested.
5. No residual effects from prior chemotherapy.
6. No contraindications to X-ray therapy.
7. Histological proof of malignancy.
8. No active infection.

**TABLE 6:** *Trial #2:* **Comparative Trial of Chemotherapy and Radiotherapy in Patients with Non-Resectable Cancer of the Lung.**

| | |
|---|---|
| Total number of patients considered for study | 415 |
| Number of patients rejected as medically unsuited or not acceptable for radiation therapy | 196 |
| Number of patients actually entered on study | 219 |
| Patients with no prior therapy | 196 |
| Patients with prior therapy | 23 |

A significantly greater portion of patients had a decrease in the size of tumor with radiation therapy than with $HN_2$ therapy or with the combination. Survival curves for the 3 groups from the start of treatment are almost identical, indicating a lack of a superior treatment in any group. No difference was seen between the 250 KV and 2 MEV groups. Fifty % of the patients in each group had died by 110 days after the start of therapy. A small number were alive at the end of 1 year: 14% in the radiation treatment group alone, 7% in the simultaneous $HN_2$ and radiation therapy group, and 16% in the $HN_2$ group followed by radiation therapy. These were not statistically different. The results of this study indicated that 4,000 rads of therapy did not influence survival in patients with cancer of the lung and that $HN_2$ therapy simultaneous with the X-ray therapy augments toxicity and treatment time without survival benefit. Treatment with $HN_2$ alone followed by X-ray therapy also was without beneficial effect as indicated by survival curves. The over-all benefit in the 3 treatment groups was less than 20%. The possibility that occult metastatic disease might be treated by the chemical agent, while the primary pulmonary lesion benefited from both modalities of therapy had not been realized, and there was nothing to indicate that treatment with $HN_2$ before X-ray therapy had any benefit. Survival time appeared to be independent of the form of treatment administered, with natural selection alone determining the patients that survived longest.

### Trial 3

Our attention was next directed to considering the possible radiation potentiating effects of 5-fluorouracil (5-FU) and actinomycin D as they applied to the therapy of bronchogenic carcinoma. The group undertook a comparative evaluation of X-ray therapy alone, and in combination with 5-FU and actinomycin D.[7] Three hundred and forty-two patients were divided into 4 categories based on the presence or absence of measurable disease and of metastases outside the treatment field. Random allocation between therapies was made within each patient category. 5-FU was given in a dose of 5 mg per kg daily by direct intravenous administration beginning 4 days prior to the start of X-ray therapy and thereafter on each day of radiation therapy within 3 hours before treatment. Actinomycin D was given according to the same route and schedule as 5-FU but in doses of 4 mcg per kg of body weight per day. Radiation therapy was given as supervoltage or orthovoltage therapy to a dose of 5,000 rads through opposing single or multiple fields arranged best to include the primary site and regional hilar and mediastinal adenopathy in contiguity. Supraclavicular regions were included if there was evidence of involvement in the apices of the lung or in the supraclavicular or scalene nodes. The dose was planned to be given within 5 weeks as equal fractions over a 5-day week.

Unlike the previous studies, which showed that responders had a significantly longer time lapse from diagnosis to the institution of therapy, there was a much greater uniformity and a shorter delay between diagnosis and admission to the study in all groups. The addition of drugs to X-ray therapy increased the incidence of GI toxicity and marrow depression. No added incidence of skin reactions in the patients receiving actinomycin D was noted, but the group receiving actinomycin D seemed to have a higher incidence of generalized drug toxicity than did the 5-fluorouracil group. There was no evidence that greater toxicity was accompanied by a greater response rate.

X-ray therapy alone was significantly better than the other 2 regimens, but this disappeared when the total group was broken down into patients with measurable and non-measurable diseases (tables 7 and 8). There was no advantage seen to the addition of chemotherapy to X-ray therapy regardless of whether the patient had metastatic or non-metastatic disease. When survival time was compared no significance developed between the 3 different treatment groups. Approximately one-half of the patients died at 20 weeks after the start of each regimen of therapy. This survival time does not differ significantly from that which was observed in our previous study with nitrogen mustard and X-ray therapy. When the survival data on responders to any therapy was handled separately from those patients who did not respond their survival time was longer than that of the non-responders.

**TABLE 7:** ***Trial #3:*** **Clinical Pharmacologic Study of Chemotherapy and X-ray Therapy in Lung Cancer.**
Response Rates

| Therapy | Measurable (50% shrinkage) | Non-measurable (Objective Improvement) | Total |
|---|---|---|---|
| X-ray (5,000 r) | 20/63 | 15/52 | 35/115 |
| X-ray + 5-FU | 11/59 | 11/54 | 22/113 |
| X-ray + Actino D | 12/57 | 6/57 | 18/114 |
| P= | >0.01 <0.05 | >0.02 <0.05 | <0.01 |

**TABLE 8:** ***Trial #3:*** **Clinical Pharmacologic Study of Chemotherapy and X-ray Therapy in Lung Cancer**
Response Rates

| Therapy | Metastases | No metastases | Total |
|---|---|---|---|
| X-ray | 28/87 | 7/28 | 35/115 |
| X-ray + 5-FU | 18/90 | 4/23 | 22/113 |
| X-ray + Actino D | 18/98 | 0/16 | 18/114 |
| P= | >0.06 | >0.01 | >0.02 |

In evaluating the possibility that responses were related to cell type, it was noted that the greatest majority of tumors were histologically of the squamous-cell and undifferentiated variety. The numbers of adenocarcinomas and oat-cell carcinomas were small, but the response rate was highest in the oat-cell carcinoma group. The median survival for the entire group receiving X-ray therapy was 136 days, for those receiving X-ray therapy and 5-fluorouracil 133 days, and for those receiving X-ray therapy and actinomycin D 105 days. Response carried with it a greater likelihood of longer survival than the median for each of the treatment groups.

### Trial 4

Following the completion of this study and evaluation of the data it seemed possible that potential radiation drug synergism could be overlooked under conditions in which large doses of radiation therapy (4,000-5,000 rads) were being given and that the combination of drug with smaller doses of X-rays might provide a more suitable model for the demonstration of radiosensitization by drugs. A randomized clinical trial was initiated to test the hypothesis that 5-FU could truly enhance the antitumor effect of radiation.[8] Patients with bronchogenic carcinoma in whom a measurable mass was present on X-ray films were randomly assigned to 1 of 3 treatment groups: 2,000 rads, 2,000 rads + 5-FU, and 4,000 rads.

Supervoltage radiation therapy was administered to all patients in this study. The dose of 5-FU selected was below that normally used to demonstrate clinical activity in adenocarcinoma of the breast or bowel but was similar to that used in our previous study. Seventy-four patients were entered into the study in whom a measurable mass was apparent in X-ray films and in whom an anticipated survival of at least 2 months could be expected. Radiation therapy was administered in equal daily increments of 200 rads for 5 days a week until the selected dose had been achieved. 5-FU was administered intravenously in a dose of 5 mg per kg of body weight, begun 4 days prior to the institution of radiation therapy and continued thereafter on each day that the X-ray therapy was given. X-ray and 5-FU were discontinued when toxicity occurred and re-instituted according to standard protocol procedure. Sequential standarized X-rays of the chest were obtained approximately every 2 weeks during treatment and for 3 months thereafter. Chest masses were measured in 2 perpendicular diameters and the size recorded as the product.

The results of this study are to be published in the near future. They suggest that the combination of 5-FU and 2,000 rads was similar to 4,000 rads in producing tumor shrinkage and better than the lower dose of X-ray alone. The presence of an increased number of oat-cell carcinomas in the high radiation therapy and combination therapy group tended to weigh the results in favor of greater shrinkage of tumor in these 2 groups (average shrinkage 69% as compared to 44% for all cases in the same groups). When the oat-cell cases are deleted and the groups compared, there is still a larger difference in mean tumor shrinkage for the 2,000 rad group as compared to the other 2 groups.

In comparing the means and inspecting the frequency of high responders as compared to low responders the combination of 5-FU and low dose X-ray therapy appears to be equal to the high-dose X-ray therapy and both are better than the low-dose X-ray therapy alone as measured by reduction in tumor size. The results of this investigation would suggest that 5-FU enhances radiation action. This report contrasts in some aspects with our previous study. In that study the response of measurable bronchogenic tumors to X-ray therapy alone was superior to 5-FU plus X-rays. In the present study there was no difference between X-ray therapy and combination of low-dose X-rays and 5-FU, both achieving a response rate to that achieved by X-rays alone in our prior study. Maximum tumor regression in the combination therapy group occurred at 6 weeks, approximately 3 weeks following the completion of treatment, and it is conceivable therefore that some of the therapeutic gains achieved by combined antimetabolite and X-rays were suppressed in the prior study by the continued administration of the drug for an additional period of time when combination therapy was given. The results suggest that the same antitumor therapy can be affected by employing combination treatment and reducing treatment time by approximately one-half. Further investigations concerning survival time and the length of time before progression occurs must be investigated. These factors were not looked for in this study.

### Trial 5

In 1965 Drs. Ross and Selawry[9] reported their preliminary investigations on methotrexate given in an intermittent dose schedule as a new approach to the treatment of bronchogenic carcinoma. This pilot study in ambulatory patients had suggested the superiority of semiweekly methotrexate over 2 other dose schedules for the induction and maintenance of response at acceptable levels of toxicity.

The Eastern Cooperative Oncology Group developed a study designed to explore these principles and relate them to the treatment of bronchogenic carcinoma. Three treatment groups (table 10) were selected, and patients were randomly allocated to the treatment by a closed envelope technique. Drug was obtained from a single lot and blinded so that investigators would not know whether the patient was receiving high-dose methotrexate, low-dose methotrexate, or placebo. Survival was to be used as the main parameter for the evaluation of drug effect and patients were to be treated for at least 4 months, which was longer than the expected median

TABLE 9: *Trial #5:* **Methotrexate Dose-Response Study for Patients with Bronchogenic Carcinoma.**

Response Rates
(based on data from Selawry pilot study in ambulatory patients)

| Mg/kg dose | Mtx I.V. Schedule | No. patients | 50+ Response | Median duration of response (days) |
|---|---|---|---|---|
| A. 0.4 | On 4 subseq. days, repeated q3 weeks | 18 | 2 = 11% | 21 (12-137) |
| B. 0.8 | Twice weekly | 17 | 7*= 41% | 87+ (10-130+) |
| C. 10.0 | Every 3 weeks | 17 | 3 = 18% | 30 (14-65) |

* including 3 patients with complete tumor regression.

TABLE 10: *Trial #5:* **Methotrexate Dose-Response Study for Patients with Bronchogenic Carcinoma.**

| Treatment programs | | Duration of treatment |
|---|---|---|
| MTX | 0.6 mg/kg twice weekly i.m. | 4 months in non-responders and short-term responders<br>4+ months in responders and patients with static disease |
| MTX | 0.2 mg/kg twice weekly i.m. | |
| PLACEBO | 0.1 ml/kg twice weekly i.m. | |

survival from the onset of therapy. Changes in tumor size were to serve as an additional parameter of response.

This study is now completed and undergoing an extensive analysis and evaluation.[10] Our current review of the data enables us to make the following tentative generalizations prior to the publication of the study.

Bronchogenic carcinoma as presented to the Eastern Group in this study can be viewed as 3 distinct disease entities which behave distinctly from each other. There are 3 distinct survival curves in which the measurable disease is different from the nonmeasurable and distinctly different from the palpable disease.

Undifferentiated tumors are found much more frequently in the palpable classification, and squamous-cell diseases found much more frequently in the measurable classification.

This study demonstrated that Methotrexate conveys some benefit to the patient with inoperable bronchogenic cancer. The effect is variable, depending upon the characteristics of the patient undergoing treatment. Overall benefit was not dose-related in the doses used.

## Conclusions

The treatment of cancer of the lung still remains relatively unsatisfactory. Radiation therapy appears not to prolong survival very much. The addition of chemotherapy to X-ray therapy does not improve the over-all survival, and while the shrinkage of local tumors appears to be associated with increased survival the fraction of patients showing such regression is small. The high incidence of extrathoracic spread requires some form of systemic therapy. New reports suggest that cyclophosphamide may add to the beneficial effects of X-ray therapy and also be effective in non-radiated patients. We have demonstrated that 5-FU enhances the effect of low-dosage X-rays, at least as far as causing regressions of local tumor masses. While some antineoplastic agents and X-ray therapy can induce objective responses, the actual impact upon the significant prolongation of survival is unimpressive and more definitive studies are necessary.

Procarbazine and hydroxyurea have been stated to show radiation-sensitizing effects *in vitro* and *in vivo*, and both of these drugs have been reported to have some beneficial effects in lung cancer. Our group is now involved in a new protocol study to determine the comparative effectiveness of radiation with and without procarbazine or hydroxyurea adjuvant chemotherapy in localized lung cancer. The study will also compare the effectiveness of cyclic high-dose cyclophosphamide as compared with intermittent low-dose cyclophosphamide at weekly intervals in the patients with metastatic disease outside the thorax. This protocol will attempt to delineate the role of these agents in the therapy of bronchogenic carcinoma.

The principles of controlled clinical trials have been an essential component of our major studies in bronchogenic carcinoma. They have demonstrated the feasibility of utilizing the coöperation of the investigator and statistician in planning and executing clinical trials involving appropriate randomization schemes, blinded controls when desirable, statistical treatment of the data, and finally cautious generalization of the results. Such trials are essential if we are to find an effective form of therapy for carcinoma of the lung.

## References

1. LASAGNA, LOUIS: The Controlled Clinical Trial: Theory and Practice. J. Chronic Dis., 1955, 1, 353.
2. ZUBROD, C. G., ET AL: Appraisal of Methods for the Study of Chemotherapy of Cancer in Man: Comparative Therapeutic Trial of Nitrogen Mustard and Triethylene Thiophosphoramide. J. Chronic. Dis., 1960, 11, 7.
3. ZUBROD, C. G.: Experimental Design in Clinical Trials of Anti-tumor Drugs. Proceedings, Third National Cancer Conference. Philadelphia: J. B. Lippincott & Co., 1957, p. 433.
4. CHALMERS, T. C. AND DEDERICK, M. M.: A Comparison of X-ray Therapy and Chemotherapy in the Treatment of Bronchogenic Carcinoma. NCI Monograph No. 3. Conference on Experimental Cancer Chemotherapy, 1960.
5. CHALMERS, T. C.: Combination of Radiotherapy and Chemotherapy in the Treatment of Carcinoma of the Lung. Cancer Chemother. Rep., 1962, 16, 463.
6. KRANT, M. J., ET AL: Comparative Trial of Chemotherapy and Radiotherapy in Patients with Non-Resectable Cancer of the Lung. Amer. J. Med., 1963, 35, 363.
7. HALL, T. C., ET AL: A Clinical Pharmacologic Study of Chemotherapy and X-ray Therapy in Lung Cancer. Amer. J. Med., 1967, 43, 186.
8. KRANT, M. J., ET AL: Radiation Potentiation by 5-Fluorouracil. A Clinical Demonstration in Bronchogenic Carcinoma. Personal Communication.
9. ROSS, C. AND ŠELAWRY, O. S.: Comparison of Three Dose Schedules of Methotrexate in Lung Cancer. Proc. Amer. Ass. Cancer Res., 1965, 6, 54.
10. KRANT, M. J., ET AL: Methotrexate Dose-Response Study for Patients with Bronchogenic Carcinoma. Personal Communications.

# Medical Genetics: An Esoteric Science or an Aid to Patient Care?*

VERLE E. HEADINGS, M.D., PH.D.† AND
ROBERT F. MURRAY, M.D., M.S.‡

MEDICAL GENETICS IS A RELATIVELY new autonomous discipline. The tendency for the busy clinician and the student of medicine to look upon medical genetics as a source of fascinating information with little relevance to current patient care is likely the product of several factors. In the first place, its novelty places it in the position of needing to prove its worth. Secondly, recent newsworthy discoveries in genetics have emphasized the revolutionary, science fiction applications rather than the practical aspects of this discipline. Finally, the primary emphasis in medical genetics is prevention of disease. By its very nature, therefore, goals and results of prevention are long-range, and both physicians and patients who tend to be oriented toward cure of disease frequently find it less rewarding.

The thesis of the discussion to follow is that the potential major contribution of medical genetics to patient care at present concerns various aspects of preventive medicine. It is our hope that dissemination of this information will lead to wider application of genetic knowledge in this area.

It may be surprising to realize that approximately 700 genetic loci in man are confidently known.[1] Mutations at these loci account for more than 3000 clinically and/or biochemically detectable abnormalities. Most of the aberrant traits arising from these loci are rare. In the aggregate they represent a significant proportion of the total spectrum of clinical medicine. In addition, a number of common disorders are clearly under significant genetic control, but the mode of inheritance or number of genetic loci involved has not been defined. Due to a major decline in the frequency of lethal infectious diseases and improved treatment and supportive care for other formerly lethal conditions many more of the pediatric hospital beds in affluent societies are occupied by children with genetic and congenital disorders. A survey of a major referral hospital revealed that at least 15-20% of the patients had diseases in which mutant genes played a large part. About 11-12% of the mortality at 2 English Hospitals was due to hereditary disorders.[2] Approximately two-thirds of all deaths up to age 30 in the United States are caused by congenital malformations and diseases of early infancy, often in the immature infant.[3] These disorders represent a much greater loss in life years than do chronic diseases late in life, such as heart disease, cancer, and stroke.[4] The costs of inherited disorders include the emotional burdens borne by patients, parents, and other members of the family, the financial expenditures by family and society, and the committment of limited health manpower in maintaining individuals with chronic conditions.

Since there is still a prevalent belief among physicians that hereditary disorders are always congenital there is a tendency to think that only pediatricians need to be concerned with inherited disorders. This is, indeed, fallacious because a number of hereditary conditions are commonly first clinically manifest during puberty or in adulthood. Examples of such conditions are shown in table I. A given

**TABLE I: Examples of Genetic Disorders Usually Diagnosed in Late Childhood or Adult Stages.**

| Disorder | Usual age at time of diagnosis (years) |
|---|---|
| Polycystic kidney (adult type) | 20-30 |
| Familial polyposis of the colon | 10-30 |
| Huntington's chorea | 30-40 |
| Muscular dystrophy (facioscapulohumoral type) | 7-20 |
| Emphysema secondary to $\text{alpha}_1$-anti-trypsin deficiency | 30-50 |
| Adrenal hyperplasia (late onset type) | puberty |
| Testicular feminization | puberty |
| Klinefelter's syndrome | puberty |
| Turner's syndrome | puberty |

The last 4 conditions can be detected earlier through appropriate laboratory studies if there is a high degree of suspicion.

---

* Preparation of this paper was supported by Special Project Grant 12HS: 414, U.S. Children's Bureau, to the Pediatrics Department of Howard University.

† Geneticist and Assistant Professor of Pediatrics, Howard University College of Medicine, 520 W Street, N. W., Washington, D.C.

‡ Medical Geneticist and Chief of the Medical Genetics Unit, Assistant Professor of Pediatrics and Medicine, Howard University College of Medicine, Washington, D.C.

well-defined hereditary condition can turn up in the practice of physicians in almost any medical discipline because of different complaints. This can be illustrated by acute intermittent porphyria. Depending on age of onset and the particular variant of this condition the patient may come with jaundice to the pediatrician or internist, to the surgeon with acute abdominal pain, to the psychiatrist with acute psychosis, or to the dermatologist with cutaneous lesions and hyperpigmentation.

The objective of this discussion is to highlight current major practical applications of medical genetic information to the care and wellbeing of patients and their families. We believe that more effective use of already available information promises much larger dividends than do the numerous grandiose speculations on genetic engineering. Manipulation of gene structure offers potential dividends, but it is of doubtful value to introduce biochemical changes with undefined secondary effect into the presently ill-defined human genome.[5] Various anticipated new applications of medical genetic information that can confidently be predicted will be excluded from this discussion.

## Orientation of Medical Genetics

In a clinical sense, medical genetics is mainly oriented toward the whole family both in its diagnostic and therapeutic aspects. Its aim is to improve the quality of life for the individual and his family at a level which includes both physical and emotional wellbeing. As in other areas of medicine, it attempts to assist families in their goal of producing children who have the capacity for good health, and when this fails, to provide sufficient understanding of causation and prognosis to allow a rational choice of measures which maximize the child's wellbeing.

The therapeutic aspect of medical genetics involves preventive medicine in 2 differing respects: preventing the recurrence of deleterious inherited diseases by preventing hereditary transmission and preventing certain sequellae and decreasing morbidity of inherited diseases by early detection and supportive treatment. Limited studies dealing with the first of these indicate that parents who are subject to a high recurrence risk for a seriously handicapped child appear to use genetic counsel in subsequent family planning.[6,7]

## Major Investigative Tools

It should be emphasized that the medical genetic evaluation must be concerned with the whole patient and not a particular organ or organ system. Specific genetic defects, e.g., Marfan's syndrome or homocystinuria, can produce abnormalities of the eye, cardiovascular system, and the joints. More than in any other medical discipline medical genetics focuses on the family medical history which is formalized as a family tree or pedigree. The pedigree is constructed from information obtained by interviewing 1 or more family members (usually at least both parents), examination of the propositus, and where possible, both parents and normal sibs, and examination of any other affected individuals in the family. Patterns of affected individuals within families commonly conform to 1 of 5 modes of inheritance, and each entails a different recurrence risk.[8,9] A number of common malformations occur in familial distribution, but most do not appear to be the product of single mutant genes. For these, empiric recurrence risks have been derived and are useful in counseling.[10] The interpretation of the pedigree pattern and presenting phenotype determine which, if any, diagnostic laboratory investigations are needed. In medical genetics the major diagnostic tools include sex-chromatin count, chromosome analysis, measurement of various nutrients and metabolites in blood and/or urine such as mucopolysaccharides or amino-acids, enzyme activity measurements in blood or tissue, and red blood cell and tissue-antigen typing. In addition, information obtained by the diagnostic techniques of other specialties contributes significantly to genetic evaluation.

## Current Applications of Genetics

The general rubric of family planning is a major concern of medical geneticists. It is reasonable to assume that parents are anxious to safeguard the health of their potential family. The contribution of medical genetics toward this end can occur at any of several levels. Whenever an incapacitating trait is segregating in a family, the estimate of a recurrence risk serves as 1 of the bases for planning a family; a risk estimate allows a more rational decision about additional pregnancies, adopting children, or terminating pregnancy. Termination of pregnancy may serve to correct contraceptive failure where a high recurrence risk exists or when knowledge of the genetic risk is made available after a planned pregnancy is underway. The decision for termination may be based on a probability derived either from historical pedigree information, cytogenetic, or biochemical abnormalities with known clinical consequence. Detection of heterozygous carriers by biochemical methods is technically feasible for certain of the recessively inherited metabolic traits (40-50). This allows prospective identification of high-risk mating prior to the occurrence of an affected child.[11] The measured values are sometimes misleading or ambiguous, since for many of the carrier conditions the range of values for heterozygotes and normal individuals overlap. A limited number of single-gene traits and chromosome anomalies, currently between 20 and 30 in number, can be diagnosed prenatally with nearly 100% certainty.[12,13] This means that the birth of children with certain genetically determined abnormalities can be prevented.

Certain inherited disorders, representing a very small fraction of the total accumulation of deleterious traits, can now be treated with qualified success if an early diagnosis is made. Examples of such disorders and their treatments are shown in table 2. Treatments of this type in no sense represent a genetic cure for these disorders but effect a total or partial prevention of the clinical symptoms.

**TABLE 2: Examples of Treatment for Inherited Disorders.**

| Disorder | Treatment |
|---|---|
| Phenylketonuria | Low phenylalanine diet |
| Galactosemia | Exclude galactose from diet |
| Branched - chain ketonuria | Exclude branch - chain amino-acids from diet |
| Orotic aciduria | Add cytodylic and uridylic acids to diet |
| Agammaglobulinemia | Administer gamma globulin |
| Genetic defects of thyroid hormonogenesis | Administer thyroid hormone |
| G-6-PD deficiency | Avoid administration of specific hemolytic drugs |
| Wilson's disease | Deplete copper stores |
| Homocystinuria | Low methionine diet and/or administration of pyridoxine |
| Familial polyposis of the colon | Colectomy |

A more crucial contribution of medical genetics to preventive therapy concerns the detection of those members of a patient's family who are at risk for developing overt symptoms of the disease in question. An assessment of this risk is based on pedigree analysis and may frequently lead to early diagnosis. Since early diagnosis often allows more effective control of deleterious sequellae of a disease, the contribution of medical genetics to early diagnosis will become increasingly significant.

The following examples illustrate the widely diverse benefits from an aggressive application of genetic knowledge to the problem of early diagnosis and treatment. 1. There are certain disorders in which early treatment is important from a developmental standpoint. An example of this is congenital nerve deafness in Waardenburg's syndrome.[14] This condition is characterized by nerve deafness, white forelock, and heterochromia irides. It is transmitted as an autosomal dominant trait. Unrecognized deafness in children can lead to learning difficulties if special education is not instituted early. After making a diagnosis of heritable deafness, therefore, the clinician should institute a careful search for other potentially deaf individuals among the family members at risk in order to prevent the development of learning difficulties. 2. Wilson's disease is a rare recessively inherited disorder of copper metabolism with excessive accumulation of copper in tissues. Since there are longterm effects on hepatic and cerebral function, early treatment with dietary copper restriction and penicillamine therapy is essential.[15] The clinician who makes such a diagnosis should, therefore, conduct studies on other family members at risk. 3. Primary hypertension is clearly a heritable disorder although the mode of inheritance remains uncertain. This uncertainty does not preclude an empiric estimate of the recurrence risk, which may be used to alert the clinically normal members of the family who are at risk to seek early and frequent monitoring of blood pressure. 4. $\text{Alpha}_1$ -antitrypsin deficiency, an inherited deficiency of an alpha globulin, is significantly correlated with the occurrence of emphysema. The asymptomatic relatives of patients who have both emphysema and the globulin deficiency should be tested for the deficiency so that they can be counseled to avoid such hazards as smoking and industrial pulmonary irritants.[16] 5. Hereditary angioneurotic edema is a rare, dominantly inherited disorder involving episodes of acute localized edema, with onset during or after childhood. Approximately 20% of individuals die from acute airway obstruction. When an individual is known to be at risk for this disorder it is advisable that he carry on his person a notice of this fact so that treatment can be initiated more quickly.

It is increasingly apparent that any given broad diagnostic category may encompass multiple etiologies. In such instances, genetic evaluation occasionally aids in delineating a specific diagnosis. For example, genetic information about a case of mental retardation can contribute to determining prognosis and early tailoring of the environment to the individual's needs. Huntington's chorea, an inherited neurodegenerative disorder with characteristic onset in middle life, is frequently diagnosed in the earliest stages only when there is a positive family history leading to a high degree of suspicion. Among the clotting disorders, classical hemophilia displays an X-linked recessive pattern of affected individuals whereas von Willebrand's disease displays an autosomal dominant mode of inheritance.

An accurate family history can serve to differentiate these disorders.

A final major application of medical genetics is chiefly psychotherapeutic in its impact. Some of the debilitating consequences of congenital or major hereditary disorders are the anxieties, misconceptions and myths which surround these disorders. These perceptions serve both to distort social and emotional relationships of family members as well as to confound rational family planning. A careful discussion of the etiology and prognosis of such misfortunes, as well as misconceptions, removes much of the foreboding mystery and social stigma frequently attached to genetic diseases. Genetic counseling frequently provides relief from anxiety to those members of the family who are not genetically at risk for the trait in question. Also, the knowledge that a given trait has a low recurrence risk is perceived by most parents as good news.

## Counseling

Having arrived at the most probable diagnosis and recurrence risk, we must interpret their meaning for the patient. The core of the therapeutic endeavor of medical genetics is genetic counseling. The effectiveness of this effort depends in large measure on the empathy and respect which the counselor conveys to his patient. The well-trained and effective counselor rarely dictates a course of action. A lucid and reasonable interpretation of the patient's problem followed by specific options for dealing with it tends to elicit the voluntary participation of the patient and/or his family, which is essential to implementing beneficial measures.

Generalizations can be made as to the relative significance of various risks. One might consider low, intermediate and high risks, respectively, to correspond to 5, 10, and 25% or greater. A reference point for judging the significance of such risks is the fact that the average mating entails a 2 to 3% risk of producing a child who bears a major congenital disorder. The acceptability of a risk is influenced by both the actual risk, the degree of disability imposed by the disorder, and the probability of an infant with a major disorder surviving beyond the perinatal period. In the final analysis it is the parent who determines acceptability of a given risk, and this varies among parents. If anxieties and poorly answered questions remain, the parent is unlikely to act intelligently on the information given. It is highly misleading and counter - productive for the counselor to deal in absolutes such as "you have no chance of producing a second affected child" or "you can never give birth to another normal child." It is important to emphasize the distinction between high-and low-risk conditions. In many instances it is possible to assign a condition to 1 of these 2 general categories, even when the mode of inheritance remains uncertain.

As in most medical disciplines, some patients present with findings for which no reasonably certain diagnosis of recurrence risk is currently possible. Such does not, however, necessarily preclude the giving of advice or information which is useful to the patient in making a decision about continued reproduction. This will be illustrated by the following example.

Two young parents were seen with a history of 2 pregnancies, each terminating with infants who had bilateral renal aplasia and multiple skeletal malformations. The mother was a hairdresser and had daily exposure to a number of chemical aerosols. During the first trimester of both pregnancies she practiced her profession. It did not prove possible to distinguish in this case between a teratogenic agent and a recessively inherited trait. Despite this ambiguity the parents were inclined to accept a potentially high recurrence risk and try to have more children of their own, since affected infants would be unable to survive beyond the perinatal period.

In some instances long-term followup can contribute significantly toward making a genetic diagnosis since new births, phenotypic changes during the life history of a disorder, or late onset of symptoms can clarify an initially ambiguous pedigree pattern.

## Summary

We have attempted to give an overview of the role of medical genetics in patient and family care. With the decline in the frequency of lethal diseases of microbial origin and improved therapeutic measures for other formerly lethal conditions, there has occurred a significant relative increase in the proportion of disorders which are the result of major genetic factors. At the present time and in the forseeable future the preferred form of treatment for major deleterious traits is to prevent recurrence. In instances in which this is not achieved, knowledge of genetic risks facilitates early diagnosis and symptomatic treatment. There is a need to develop more awareness by clinicians and laymen alike of the practical applications of human genetics. This awareness is particularly difficult to achieve because the discipline employs modes of treatment with which many clinicians are relatively unfamiliar and because the family must take an active and sustained role in the diagnosis and therapy.

## References

1. MCKUSICK, V.: Mendelian Inheritance in Man, 2nd edition. Baltimore: The Johns Hopkins Press, 1968.
2. CHILDS, B.: Personal communication.
3. KIRK, D.: Personal communication.
4. APOSHIAN, H.V.: Perspect. Biol. Med., 1970, 14, 98.
5. NEEL, J.V.: Science, 1970, 170, 815.
6. TIPS, R.L. AND LYNCH, H.T.: J.A.M.A., 1963, 184, 183.
7. CARTER, C.O.: Comments on genetic counseling, In Proceedings of the Third International Congress on Human Genetics, edited by J.F. CROW AND J.V. NEEL. Baltimore: The Johns Hopkins Press, 1967, p. 97.
8. CARTER, C.O.: Lancet, 1969, 1, 1139.
9. CARTER, C.O.: Lancet, 1969, 1, 1252.
10. SMITH, D. AND AASE, J.: J. Pediat., 1970, 76, 653.
11. HSIA, D.Y. -Y.: Ann. N.Y. Acad. Sci., 1966, 134, 946.
12. NADLER, H.L.: J. Pediat., 1969, 74, 132.
13. NADLER, H.L. AND GERBIE, A.B.: New Eng. J. Med., 1970, 282, 596.
14. GELLIS, S.S. AND FEINGOLD, M.: Atlas of Mental Retardation Syndromes. Washington: U.S. Department of Health, Education, and Welfare, U.S. Government Printing Office, 1968, p. 164.
15. BERGSMA, D., Editor: Wilson's Disease, Birth Defects Original Article Series, Vol. IV, No. 2. New York: The National Foundation - March of Dimes, 1968, p. 114.
16. LIEBERMAN, J.: New Eng. J. Med., 1969, 281, 279.

# Photosensitivity Caused by Oral Contraceptives

## Report of a Case*

MARVYN L. ELGART, M.D. AND ROBERT S. HIGDON, M.D.

ORAL CONTRACEPTIVES HAVE CAUSED numerous complications. Dermatologic ones have included hair loss,[1] hyperpigmentation,[2] increased frequency of Candida infections,[3] and exacerbation of herpes gestationis.[4] Photosensitivity has been reported only once[5] in a patient taking norethylnodrel with mestronol (Enovid E$^R$). On testing, an estrogen (diethylstilbesterol) alone appeared sufficient to produce light hypersensitivity. This report presents a similar case.

### Report of Case

Mrs. L. W., a 23-year-old Caucasian Peace Corps worker, first developed a dermatitis on her face in November, 1967, following an extensive sun exposure in Hawaii. The eruption subsided, and the use of a sun screen lotion (UVAL$^R$) apparently prevented further occurrences. She and her husband were transferred to Western Samoa in January, 1968 but had only limited sun exposures prior to July 8, at which time she spent several hours in intense sunlight. By nightfall, her face was quite red, but the remainder of her exposed skin showed relatively little reaction. On July 9 facial edema appeared with moderate swelling of the eyelids. By July 10 the dermatitis was weeping and the eyelids were swollen shut. The eruption subsided after 1 week of bland therapy.

Similar attacks of severe facial dermatitis following prolonged sun exposures occurred again once in August, once in September, and twice in November, 1968. The patient was in good health, used no soaps or cosmetics containing photosensitizers, and gave no history of previous light reactions. Porphyrin studies and a lupus erythematosus (LE) cell preparation were negative.

The only drug used was Ortho-Novum$^R$, 1 mg cyclically, beginning 3 months prior to the initial attack in Hawaii. In retrospect, occurrence of her facial dermatitis was always associated with ingestion of Ortho-Novum$^R$, whereas exposures to sunlight in the absence of medication produced no reaction. She discontinued Ortho-Novum$^R$ during October, 1968 and had no reaction during that month.

Physical examination of December 16, 1968 was essentially normal, and laboratory findings were within normal limits. LE cell preparations were negative.

We did not suspect a relationship between oral contraceptives and the patient's photosensitivity reactions when initial tests were made. Exposures with a Solar Simulator (a continuous spectrum Xenon arc lamp) on her back revealed a normal minimal erythema dose (MED) of 2 minutes to light waves above 290 nm and no reaction to light filtered to remove wavelengths below 310 nm. Photopatch tests to common photosensitizers (bithionol, dichlorophene, hexachlorophene, tribromosalycilanalide, and polybromosalycilanalide) were unrevealing. By means of a hot quartz ultraviolet (UVL) lamp the MED at 18 inches was determined to be 30 seconds.

When the possible relationship to Ortho-Novum$^R$ was considered, tests on her back were repeated while she was taking the drug, but results were identical. At this point it was recalled that her eruptions had been confined to the face. Therefore the face was exposed to hot-quartz UVL for 30 seconds at 18 inches (the same dose which produced only a MED on the back), and within a few hours an erythematous, edematous reaction developed which required 72 hours to subside. Later, while still on medication, the right side of the face was given a 90-second unfiltered exposure (hot-quartz UVL at 18 inches) and the left side 180 seconds, filtered through window glass. This produced a moderately severe reaction on both sides of the face (figure 1).

Ortho-Novum$^R$ was discontinued for 1 week and the above tests repeated. The results were a normal erythema reaction on the right side of the face and no reaction on the left side (figure 2).

The patient returned to Western Samoa and discontinued taking oral contraceptives. Subsequently she reported having no further photosensitivity reactions despite frequent and prolonged sun exposures.

---

*** From the Department of Dermatology, The George Washington University School of Medicine, 1331 H Street, N.W., Washington, D. C.**

**Reprint requests to The George Washington University Clinic, 2150 Pennsylvania Avenue, N.W., Washington, D. C. 20037 (Dr. Elgart).**

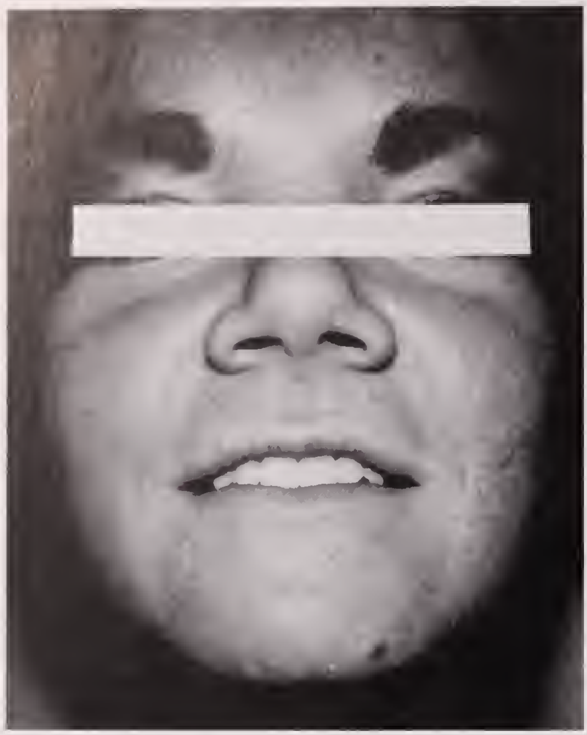


FIG. 1. While taking Orth-Novum$^R$, the right side of patient's face was exposed to unfiltered hot-quartz UVL, while the left side was exposed to light filtered through window glass. A reaction occurred within 24 hours on both sides which was more severe than a normal sunburn reaction.

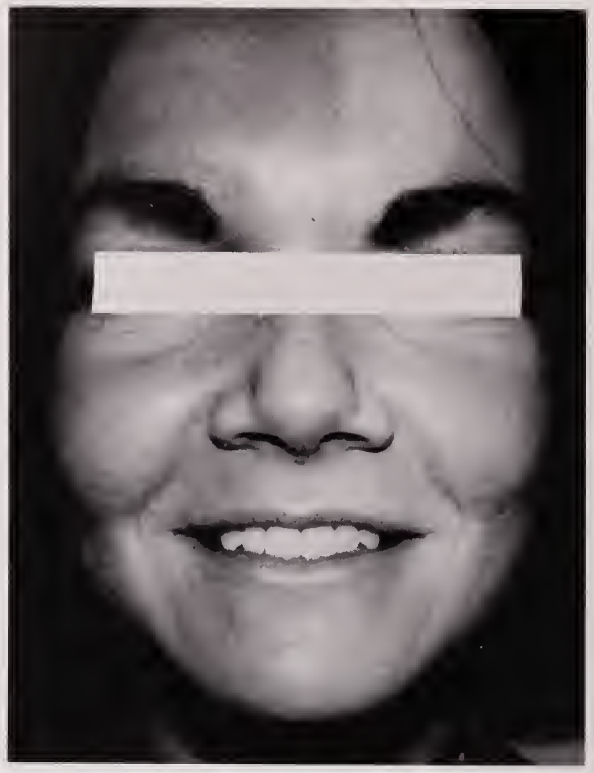


FIG. 2. After discontinuing Orth-Novum$^R$, the right side of patient's face was again exposed to unfiltered hot-quartz UVL, while the left side was exposed to UVL filtered through a window glass. After 48 hours the right side shows a normal erythema while the left did not react at all. Note sharp vertical border of reaction.

## Discussion

This patient had facial photosensitivity reactions only if she was taking Ortho-Novum$^R$ and simultaneously exposed to intense sunlight for prolonged periods. In contrast, our testing revealed that the same dose of UVL required to produce a minimal erythema on her back was capable of precipitating a severe reaction on her face. Furthermore, the reaction could be produced by light passing through window glass. These characteristics suggest a phototoxic rather than a photoallergic response. These findings are similar to those in the previously reported case,[5] although the reaction in that patient was papulovesicular.

Several unusual features were present in our patient. Only her face appeared to be sensitive, both in the clinical and the testing situations. Repeated attempts to reproduce the reaction on her back were unsuccessful. Surprizingly, her reaction in the clinical situation appeared to occur only after intense sunlight exposure, although a minimal exposure to UVL in the office could precipitate the same reaction. Surely, in an environment as tropical as Hawaii and Samoa, it is to be expected that she received that much exposure on more frequent occasions, but this appears not to have been the case.

An increased incidence of positive LE-cell preparations in patients taking oral contraceptives has been reported,[6] but another study was unable to document this finding.[7] In the hope of explaining our patient's photosensitivity, repeated LE-cell preparations were done but were negative. In addition, she had no symptoms or signs of systemic LE except for sun sensitivity.

Porphyria cutanea tarda has been precipitated by estrogens.[8] Birth-control pills have not been implicated, although a case of acute intermittent porphyria has been attributed to them.[9] A search for abnormal urinary porphyrin excretion was negative.

In the previously reported case the mestranol portion of the oral contraceptive proved to be the offending agent and other estrogenic compounds in that patient caused similar difficulty. Estrogens alone have been reported to cause photosensitivity reactions.[10] Unfortunately, we were unable to follow our patient long enough to establish whether other estrogenic compounds or contraceptive formulas would cause her to react.

## Summary

A second case of photosensitivity in a patient taking oral contraceptives has been reported. The eruption could be produced by minimal amounts of light in the long ultraviolet portion of the spectrum. A peculiarity was the fact that the abnormal responses were limited to the patient's face.

## References

1. CORMIA, F. E.: Alopecia from Oral Contraceptives. J.A.M.A., 1967, 201, 635.
2. RESNICK, S.: Melasma Induced by Oral Contraceptive Drugs. J.A.M.A., 1967, 199, 601.
3. WALSH, H.: Oral Progestational Agents as a Cause of Candida Vaginitis. Amer. J. Obstet. Gynec., 1968, 101, 991.
4. MORGAN, J. K.: Herpes Gestationis Influenced by an Oral Contraceptive. Brit. J. Derm., 1968, 80, 456.
5. ERICKSON, L. R. AND PETERKA, E. S.: Sunlight Sensitivity from Oral Contraceptives. J.A.M.A., 1968, 203, 980.
6. SCHLEICHER, E. M.: L.E. Cells after Oral Contraceptives. Lancet, 1968, 1, 821.
7. DUBOIS, E. L., STRAIN, L., EHN, M. BERNSTEIN, G., AND FRIOU, G. J.: L.E. Cells after Oral Contraceptives. Lancet, 1968, 2, 679.
8. BECKER, F. T.: Porphyria Cutanea Tarda Induced by Estrogens. Arch. Derm., 1965, 92, 252.
9. WETTERBERG, L.: Oral Contraceptives and Acute Intermittent Porphyria. Lancet, 1964, 2, 1178.
10. YOUNG, J. W.: A List of Photosensitizing Agents of Interest to the Dermatologist. Bull. Ass. Mil. Derm., 1964, 13, 1, 33.

# Highlights of Auscultation in Acquired Heart Disease *

JOSEPH K. PERLOFF, M.D.†

THE HEART SPEAKS in a language of its own; its vocabulary consists essentially of sounds and murmurs. Once the vocabulary is understood, considerable insight can be gained into the anatomic and physiologic condition of the heart and circulation.

*The mitral orifice.* The commonest cause of obstruction at the mitral orifice is rheumatic mitral stenosis. The auscultatory hallmarks of this disorder consist of a loud first heart sound, increased intensity of pulmonary-valve closure, an opening snap, and a mid-diastolic murmur followed by presystolic accentuation. The skilled clinician not only understands the mechanisms of these signs but also how best to elicit them. A loud first heart-sound and an opening snap imply good valve mobility and together are features of tight mitral stenosis. Accordingly, these auscultatory events would not be expected in the presence of immobilizing calcification of the leaflets or considerable mitral incompetence. Similarly, a loud pulmonary closure-sound (best judged during inspiratory splitting of the second heart sound) reflects an elevated pressure in the pulmonary trunk. A presystolic murmur implies sinus rhythm and dominant mitral stenosis, so that this murmur vanishes with the advent of atrial fibrillation or appreciable mitral incompetence. In the presence of atrial fibrillation, the duration of the mid-diastolic murmur is an accurate mirror of the degree of stenosis; a mid-diastolic murmur that continues up to the end of diastole means that the gradient continues to the end of diastole, which means that stenosis is sufficient to prevent the left atrium from effectively emptying.

It is important to remember that the auscultatory signs of mitral stenosis are best heard over the left ventricular impulse. It is mandatory that the bell of the stethoscope be placed precisely over this impulse which is most readily located by palpating the region of the apex while the patient partially turns to the left. The physiologic effects of turning serve the additional useful purpose of transiently increasing the intensity of the mumur; coughing has a similar effect. Unless the proper positions and maneuvers are employed the auscultatory signs of mitral stenosis can be overlooked. Silent mitral stenosis is rare but may occur when severe pulmonary hypertension causes such enlargement of the right ventricle that it displaces the left ventricular impulse from the chest wall.

Mitral incompetence is accompanied by the prototype of the holosystolic murmur, i.e., a murmur that begins with the first heart sound and goes throughout systole up to the second heart sound. Such murmurs are generally maximal at the cardiac apex, although variations must be understood. The murmur of mitral incompetence is known to radiate to the axilla and back, but it occasionally radiates to the left sternal border, and even into the neck where it may be mistaken for the murmur of aortic stenosis. The murmur of aortic stenosis itself (especially in older patients) may be heard well if not best at the apex and incorrectly ascribed to mitral incompetence; this error can be avoided if it is remembered that the murmur of aortic stenosis, irrespective of its chest wall location, is midsystolic and ends before the second heart sound (see below).

There are 2 important deviations from the classic holosystolic murmur of mitral incompetence. A late systolic murmur preceded by 1 or more systolic clicks may accompany prolapse of a redundant posterior mitral leaflet. Although the degree of mitral incompetence is generally mild in such patients, it is important to recognize the significance of clicks and late systolic murmurs since the deranged mitral valve is susceptible to bacterial endocarditis. An early systolic or decrescendo systolic murmur is a feature of severe mitral incompetence of recent onset as with ruptured chordae tendineae; under these circumstances the major part of regurgitation occurs in early systole since a very high left atrial pressure results in a striking increase in the resistance to left atrial filling in latter systole.

***The tricuspid valve.*** The murmur of tricuspid stenosis is commonly missed even though this valvular defect occurs in 2-3% of patients with rheumatic mitral stenosis. Several guidelines set the stage for clinical recognition. The murmur is confined to a localized area along the lower left sternal border, is presystolic with sinus rhythm, and mid-diastolic with atrial fibrillation. The most distinctive feature is the selective inspiratory increase in loudness; during inspiration the tricuspid gradient increases and with it the intensity of the murmur.

---

* Submitted to MEDICAL ANNALS by the Washington Heart Association.

† Professor of Medicine, Division of Cardiology, Georgetown University School of Medicine, 3900 Reservoir Road, N.W., Washington, D. C. 20007.

When tricuspid incompetence occurs with an elevated right ventricular systolic pressure (pulmonary hypertension or congestive heart failure), there is a high velocity of regurgitant flow throughout systole and a relatively high-frequency holosystolic murmur that selectively increases during inspiration (Carvallo's sign). Occasionally tricuspid incompetence occurs with normal right ventricular systolic pressure as with Ebstein's anomaly or following tricuspid endocarditis caused by "main line" administration of addictive drugs. Under these circumstances a low velocity of regurgitant flow occurs chiefly in early systole and thus the murmur is of relatively low frequency and in early systole but still selectively increases during inspiration.

***The aortic valve.*** The aortic stenotic murmur is the model of the midsystolic murmur, crescendo-decrescendo, beginning after the first heart sound or with an ejection sound, and ending before aortic valve closure. In valvular aortic stenosis the murmur is maximal in the second right intercostal space with radiation upward, to the right, and into the neck. In older patients, especially those with calcific aortic stenosis, the murmur in the second right interspace may be harsh and 'grunting', whereas the murmur at the apex is pure and musical. It is important to remember that the classic midsystolic murmur of aortic stenosis is sometimes absent altogether in patients with severe obstruction. Left ventricular failure may result in a substantial decrease in flow across the stenotic valve with disappearance of the mid-systolic murmur or replacement by the holosystolic murmur of mitral incompetence. In the presence of an increase in antero-posterior chest dimensions (emphysema) the basal murmur may soften or vanish although radiation into the neck persists.

The typical murmur of aortic incompetence is readily recognized, especially when loud and accompanied by bounding arterial pulses. However, faint high-frequency murmurs of mild aortic incompetence are difficult to hear and must be specifically sought by applying very firm pressure of the stethoscopic diaphragm to the mid-left sternal border while the patient sits or stands, leans forward, and holds the breath in full expiration. Squatting will raise aortic root pressure and augment these faint murmurs. This serves a useful purpose in mumur detection which is important because of susceptibility to endocarditis. The direction of the blowing early-diastolic murmur should be determined by comparing its loudness along the left and right sternal borders especially at the third intercostal spaces. Prominent radiation to the right sternal border suggests a non-rheumatic etiology such as aortic-root disease or specific cusp deformity.

# Sex Education in the Public Schools: Is the Question Really Yea or Nay?

LARRY B. SILVER, M.D.*

ONE OF THE MOST IMPRESSIVE aspects of this century and especially this decade is its exceptional concern with children. This is not to say that our children are loved more intensely or that their loss is mourned more deeply than in previous times, but that there is a special awareness of them as children.

With this concern and interest came a realization that there was a special character to childhood, and indeed that it might require a special psychologic approach. A new consciousness of children developed. While this change has not been universal, it is a characteristic of the United States and other countries of the Western European tradition, and more than likely it will be the dominant orientation of the future.

One of the consequences of this recognition is that adults now have a greater conscious concern with the processes by which children learn about sexuality. During the nineteenth century the popular method of dealing with childhood sexuality when it intruded upon adults was either to suppress the behavior or to deny its existence, and to avoid thinking about it at all as long as it was not a public issue. These methods are to this day the most popular ways of dealing not only with the sexuality of children, but also with that of adults.

However, as sexuality has become more and more of a public concern in the United States, a growing desire has been expressed to instruct children appropriately in sexual matters. Appropriate instruction is usually considered to be that which teaches without provoking either discussion or overt behavior. In addition, the development of textbooks of sexual knowledge relieves parents of the anxieties and embarrassments of talking about sexuality to their children.

## What is Sex Education?

Sex education communicates not only cognitive information but also affective information, attitudes, and skills. For this reason one cannot just look at the school curriculum on sex education. Only a minority of sexual information is, in fact, learned by children in a legitimate, formal manner.

Sex is far more than a physical expression; it is a major aspect of personality. As such it is intimately related to the individual's emotional and social adjustment and to his physical development. Probably nothing influences one's life pattern so greatly as his sex membership. An individual's sense of identity, his ways of thinking and behaving, social and occupational activities, choice of associates, mode of dress, and many other subtle and overt factors are strongly conditioned by being male or female.

An individual's happiness, his success as a family member, and his civic contributions are either enhanced or diminished by his success or failure in fitting into his sex role, and in wisely managing and directing his sexuality.

Sex can never be fully understood simply by focusing upon it as a physiological process, by concentrating on the sex act, or by counting or classifying instances of sexual behavior. These facts represent aspects of sex and need to be known. But the significance of human sexuality can be fully understood only by relating it to the total adjustment of the individual in his family and society. Developing these relationships becomes the task and scope of sex education. Anything less is shallow, distorted, and ineffectual.

Yet, when discussing sex education in the public schools it is usually the formal informational channels that are emphasized. Such questions as, "What, how much, by what means, and when should children be told about sex?", are usually cognitively framed as if a rational pedagogy were the solution to the proper ordering of the sexual life. To fully assess the value or danger of formal sex education, it is first necessary to look at the total issue of how children learn about sexuality. Not just what cognitive facts they are given but the nonverbal and less formal learning that is transmitted relating to affect and attitudes on sexuality.

## Who Really Teaches Sex Education?

Children first learn of sexuality from adults (parents, teachers) and later peers. What is the sexual

---

Associate Professor of Psychiatry, Chief of Child and Adolescent Psychiatry, Rutgers Medical School, New Brunswick, New Jersey 08903.

value system of the adult members of the child's community? The most apparent element in the sexual culture of adults is the degree to which there is no real community of values. There is a cluster of negative values that represents the total body of public sexual norms. The development of adult sexual consensus about acceptable overt behavior is personalized and relates more to the interaction of pairs of individuals rather than among larger social groups. The privation of sexual consensus means that no one can be sure of the behavior of others, and this insecurity is accompanied by a belief that statements that differ from the conventional norms will be taken as evidence of sexual deviation. The only system of values that can be invoked in a time of sexual controversy, such as the controversy over sex education in the public schools, is the most conservative. This often results in the most puritan of the community defining the content of public sex education for children.

Such a situation results in several problems. This lack of consensus makes it very difficult for a body of disinterested opinion about sexuality to exist. Any statement by an individual about sexuality is commonly presumed to be related to the sexual preferences and desires of that individual. Another consequence of this lack of knowledge and consensus is the degree to which fantasy may be projected into and then shape the sexual situation. In most areas of social activity a reality check upon individual fantasies is provided either by interaction with other persons or by contact with the mass media; but the sexual area lacks such checks; and the proportion of fantasy probably outweighs the proportion of reality.

With these conditions prevalent in the adult sexual community, it is not difficult to see some of the difficulties inherent in parent-child and teacher-student interactions, out of which come the primary cognitive and affective experiences that shape character structure and sexual behavior.

The child's first exposure to such lack of knowledge is with his parents. In this interaction of parents and children during the pre-school years, what is frequently given is negative injunctions and unambiguous instructions. Compare, for example, the way a child is taught about a simple household item like the stove with the way he is taught about sexuality. The toddler is taught that the stove is hot and, whether it is hot or cold at any given moment, he is told not to touch it; for, a single failure in learning might be disastrous. As the child grows older, more flexible information and attitudes about fire, temperature, and the stove are learned. The stove may be touched when there is no fire, cooking may be experimented with, and finally a sense of rather fine discriminations are learned in order to deal with a common household object. This new information comes in both positive and negative forms and overlays the original information about the hot stove. This form of training is necessary for the child who is operating in a complex environment. However, as the child grows older, explanations of negative injunctions tend to be based more and more frequently upon rational calculations. Thus, the infant who has been warned only about "hot" when he approaches the stove, is informed as he grows older about the dangers of burning himself, and is given a complicated set of responses to use in dealing with the stove.

However, in the areas of sexuality and sexual behavior the body of apparent unambiguous and negative instruction usually is not modified by later experiences. If the child exhibits behavior which the adult perceives as sexual, the response is often 1 of 2 types. The first is to tell the child that it is wrong to behave in that way; that is, to label the behavior as unequivocally wrong. This type of information often will not come as a shock to the child, since parents who respond in this way have already communicated some elements of this attitude to the child in non-verbal learning situations. The second type of response is not to label or to mislabel the behavior. When the behavior is observed, the parent attempts to distract the child from what he is doing by interposing tasks which are suggested to be more enjoyable or by pointing out negative consequences which are not related to the sexual aspect of the behavior. As part of the process of mislabeling the infantile words for genitals and for the acts of excretion are only replaced fragmentarily by another vocabulary. The negative control of sexual information extends to single words, and the child is left to nonparental agencies for learning the specific informational content of sexuality. Teachers are also adults and probably parents and are subject to the same influences and ways of responding.

The consequence of this non-labeling phenomenon is that the primary negative and dichotomous informational inputs to the child are never revised. The primitive form of conditioning, which constructs only black and white consequences for behavior, maintains itself independently, since the parental figures, who create the sexual capacity of the child through both direct action and indirection, are not re-assessed or newly judged.

Thus, it is possible for the child to re-evaluate his parents' attitudes toward politics, vocations, and religion, since in these areas the parents have interacted with the child not only in the primitive negative manner, but also in a more complex and rational way. The child, as he matures, construes the parent as a religious, political, vocational being; and therefore the original inputs to the child are modified by consequent experiences. However, there is little doubt that most children and most adults are unable to consciously conceive of their parents as sexual creatures. Even after the experience of coitus, it is extremely difficult for a young man or woman to conceive of his parents in the same roles. The original organization of sexual learning and attitude is never challenged in any major way, and it is not easily possible for the growing child to revise these early conceptions.

Given this framework of repression and avoidance by parents, it is not surprising that the child gets the bulk of his sexual information, though not his attitudes, through peer relationships. Although the parents are not providing cognitive information about sexuality for the child, except perhaps through the safety and distance of a book, they are creating attitudes and orientations, through which information from other children and from teachers will be filtered. In the peer relationships, since no children, or at most few, have accurate information about even reproductive functions, they will systematically misinform each other just as they are systematically misinformed by their parents about being brought by the stork, being brought in the doctor's bag, etc.

What is learned is important, but it is the context in which it learned that is more important. The exchange of sexual information among children is clandestine and subversive, and the manner in which parents attempt to teach their children re-inforces this learning structure. The admonitions of parents, since they are general and diffuse, do not result so much in cessation of either interest or behavior, but in their concealment and the provoking of guilt.

The development of guilty knowledge occurs quickly, and the children's world resembles a secret society keeping information from parents and later from teachers.

Perhaps, then, sex education in the public schools is really a secondary force in the development of the sexual life of the child. This education will contribute cognitive information but will play a minor role in shaping affect and attitudes or in setting patterns of sexual life. The school has a role in sex education, but the child's sex education is far advanced and formed before he begins a school program.

## Should The School Teach Sex Education?

It is very easy for parents to decide that the school will teach their child about sex or that Sunday School will teach their child right from wrong. In doing this they can not only avoid interacting with their child in potentially awkward or embarrassing areas, but they can also project the blame for failure onto someone else. In reality, information, though probably distorted, and attitudes are acquired by the child before he gets into public school. His comfort with and readiness to learn about sexuality has also been shaped prior to entering any classroom or sex education.

The issue is not whether sex education should or should not be taught in the public school rather than in the home or not at all. The issue is not who should do it, because this is not a negotiable issue. Like it or not, parents do convey most of the attitudes and, with peers, much of the information on sexuality. The public school at best can only be a continuation of that education. The only real issue is what part of the total educational process should the public school participate in.

Ideally, the classroom could be a place where mis-information can be corrected and new information added. Through the attitudes of the teacher, both those stated and those inferred nonverbally, the child might modify his attitudes on sexuality. If the public schools could contribute these 2 parts toward the total education on sexuality, it would be extremely valuable.

## Weaknesses of Sex Education Programs

As noted earlier, parents have difficulty interacting with their children around issues of sexuality. Although they readily relinquish this role, they often project their difficulties onto the school system and then attack the program. When they complain that such courses might corrupt their child's mind or overstimulate him, they are reacting to their own concerns about sexuality in children.

The public schools also have difficulty with the issue of sex education. Collectively, educators can say that sex education should be part of the school curriculum. But, individually, educators are adults and face the same discomforts and lack of consensus as do the parents. Thus, many or most sex-education programs for children and adolescents have common weaknesses:

The sex education usually received by children can more accurately be labeled reproduction education or moral instruction than sex education. Education with reference to the total aspects of sexuality in relationships and in its meaning in interpersonal associations is left by parents and teachers almost entirely to chance. In reality, most of what the child receives is supplied by his peergroup. Reproductive and physiological information is more impersonal and has more preciseness about it than have discussions involving dating relationships, sexual behavior, and moral codes. The security of teachers or parents is threatened when they move to a consideration of issues and have to cope both with deep-seated feelings and a lack of knowledge.

The second weakness is indirectly related to this insecurity. Sex education is sometimes imposed or given. Better education is obtained by interchange and the free interplay of ideas. Few parents or teachers are adequately informed or sufficiently secure to engage in free and open dialogue with children and adolescents in matters of sex, especially when questions of standards, personal behavior, and development of moral values arise. A didactic approach may provide a feeling of security for the adult, but it teaches the child that free exahange and ready communication are impossible, that sexuality is secretive and not open for discussion. As a result, the educative process fails to eliminate fears, misconceptions, and perplexities. Usually when specific issues of sexuality become the focus of discussion, the child or adolescent receives injunctions and moralisms that provide little or no insight into situations facing him.

Sex education is considered a "telling" process. This view is widely accepted and is easily demonstrated by asking adults concerned with sex education to list questions about which they are perplexed. These questions almost always dwell on the timing, methods, techniques, and niceties of telling children about sex. This view overlooks the fact that, as noted earlier, much sex education is given and many attitudes are created during the normal day-by-day process of living in the home, the school, and the community.

Sex education is regarded mainly as an insurance against moral "disaster." If most parents could be assured that their children would lead conventional lives and would "stay out of trouble" without being given sex education, they would doubtless heave a sigh of relief. That sex education has further functions, for instance, that it might serve to bring about richer, fuller, more successful man-woman relationships and thus more complete lives, is seldom cited as a reason for sex education among educators or parents.

In brief, even though the family has the greatest influence on the child in his obtaining knowledge and attitudes on sexuality, and even though the church may make a major contribution to the formulation of ideals and moral values, the school has been given the job of teaching sex. But the school as a cultural institution reflects the fears, prejudices, and biases of society and lacks a consensus on sexuality. As a result, teachers are being inadequately prepared to provide the kind of sex education needed and are limited in opportunities for obtaining the needed preparations. The excesssive fear of administrators and teachers of arousing possible criticism if they do attempt a comprehensive sex-education program is another deterrent. Each school and each teacher giving sex education usually feels insecure and isolated, so that the little that is attempted in sex education is done as quietly as possible in an effort to avoid possible attack.

## What Should We Aim For In Sex Education Programs?

The question is not whether sex education should or should not be taught in public schools. It is how to best help the schools become free to widen their scope of sex-education programs. Hopefully, the inadequacies and the narrowness of the traditional concepts of sex education that have been discussed should point to new ways of looking at sex education.

Adults must accept as fact that young people of all ages are sexual beings with sexual needs. The purpose of sex education is not primarily to control and suppress sex expression but to indicate the immense possibilities for human fulfillment that human sexuality offers. Sex education must attempt to give the individual sufficient understanding to incorporate sex most fruitfully and most responsibly into his present and future life.

Sex education must be thought of as being educational, not moral indoctrination. Attempting to indoctrinate young people with a set of rigid rules and ready-made formulas is doomed to failure in a period of transition and conflict. Instead, the time-tested principle accepted in other areas of education must be applied: to equip children and adolescents with the skills, knowledge, and attitudes that will enable them to make intelligent choices and decisions.

Sex education must help children and adolescents understand sex in its relationship to social patterns and development. The distinction between what was and is personal in sex and what has social significance has changed greatly. Formerly, the chief social concern, as it related to sexual expression, was the repression of all aspects of sexuality from public consideration. Even such accepted aspects of sex as intercourse in marriage were seldom discussed. Today the significance of sexual expression as youthful erotic play, masturbation, homosexuality between consenting adults, mouth-genital contacts, and other variations from genital heterosexuality is being re-examined. Thus, things formerly considered to be of private, personal concern might now be reclassified as social concerns.

Further, many issues involving sexual expression in relation to social decisions are now facing the American public. The questions raised involve sex attitudes and practices. Shall laws regulating abortions be altered? What is the relation of sexual expression and sexual standards to the public disseination of contraceptive information, and to population control? What should be the legal and social attitudes toward homosexuality? Toward sexual offenders? To what extent and in what ways should sexuality be emphasized in commercial enterprise? In mass media? Such considerations point to the desirability of expanded and re-directed programs for sex education. The social significance and implications of sex need to be understood by everyone.

Sex education for adults must be given much greater emphasis. Adults need sex education in their own right for several reasons: a) to make their own lives and marriages more satisfying and creative, b) to provide the informed public opinion needed to support desirable changes in attitudes, education, laws as they relate to sex, and c) to facilitate intergeneration communication and education.

Those providing sex education must take into account the current freedom in choosing and in personal decision-making that now exists. Fifty years ago sex education did not recognize the possibility of choosing among alternative patterns of sexual behavior. There was only 1 "right" way. Today is quite different. There is now a very real freedom for adolescents and even children to speak far more openly and frankly about sexuality than their parents or grandparents could ever have believed possible. Many young people in dating relationships discuss the possibility of sexual exploration openly. Explicit references to sex not only enter many dating relationships very early but are constantly to be found in commercial advertising, books and magazines, the press, television, radio, movies, and records.

Consequently, young people are faced frequently with situations that require them to decide for or against participation in some kind of sexual relationship. This holds true not only for premarital intercourse itself, but for other forms of sexual involvement as well. This emphasizes their need for insights, factual knowledge, and understanding that will lead to sound decision making.

The chief determinant of sexual conduct is not factual information but the general feeling of satisfaction and worth that the individual has been able to develop about himself as a person. This means that sex education should discuss sexual conduct, like all personal conduct, in terms of interpersonal relationships.

## Conclusions

Parents have been content to pass the responsibility of teaching "sex" to their children to the public schools. Unfortunately, schools have been to willing to accept the full responsibility. Parents point their finger at the schools and project their own anxieties and concerns about teaching "sex" to children, and schools accept these anxieties and concerns as if they really do originate in the schools.

The school does have a role to play in sex education, but it only has a role, not the total responsibility. It is time to re-direct that projection back to the parents. Until the anxieties, concerns, and inhibitions of the parents are faced and dealt with, the educators will not be free. Until the educators are free, a broader scope of sex education in the public schools cannot be developed.

# History of the Medical Society of the District of Columbia

## CHAPTER XV

### Officers and Honors

THE MEDICAL SOCIETY'S CONSTITUTION AND BY-LAWS were revised in 1939 by Dr. John B. Nichols. It radically altered the organization's structure. Another revision was made and adopted in 1959 by the Committee on the Constitution and By-Laws of which Dr. W. LeRoy Dunn was the able Chairman.

Until 1946, when Dr. William P. Herbst was President of the Medical Society, business sessions of the organization were largely of the 'townhall' type. Prior to his administration officers were nominated from the floor, there being no nominating committee. This encouraged a haphazard selection for lesser offices, with sometimes unsatisfactory results.

To avoid the strenuous objection to change which was anticipated, a unique election system was devised which eliminated to a large extent "medical politics." This system was still in effect in 1962. The plan adopted by the Medical Society without too much opposition provided for the election of a nomination committee of 7 from 21 Active members appearing on the ballots mailed to the membership. The 21, representing various sections of the city, were chosen by the President and approved by the Executive Board. The 7 who received the highest number of votes constituted the nominating committee. The temporary chairman was the one who polled the most votes. Ballots were counted by tellers chosen by the Executive Board.

Prior to the meeting of the Nominating Committee the Executive Director of the Society, having been informed of the results of the balloting, got in touch with the temporary chairman. He was informed when his committee would meet but was not told who the other members were. He was also informed that he would find all records and information needed at the place where the meetings would be held; further, no officer of the Society would be present.

After the Nominating Committee had met and chosen a slate the Society's membership was notified that nominations would be submitted at the next business meeting and that nominations from the floor were not precluded.

This plan operated so smoothly that it eliminated most of the bickering and criticism. Ever since 1946 nominations have been made in this manner.

Officers of the Medical Society elected during the period of 1938-1962 were as follows:

Presidents of the Medical Society of the District of Columbia, 1938-1962

| Term of Office | Name | Date of Death |
|---|---|---|
| 1938-39 | William J. Mallory | August 1, 1956 |
| 1939-40 | John Hugh Lyons | February 17, 1962 |
| 1940-41 | Daniel LeRay Borden | December 10, 1969 |
| 1941-42 | Henry R. Schreiber | April 9, 1950 |
| 1942-43 | A. Magruder MacDonald | |

| | | |
|---|---|---|
| 1943-44 | Fred R. Sanderson | |
| 1944-45 | Lt. Colonel James N. Greear, Jr. | |
| 1945-46 | William Earl Clark | February 28, 1969 |
| 1946-47 | William P. Herbst, Jr. | |
| 1947-48 | Raymond T. Holden | |
| 1948-49 | John Minor | April 16, 1961 |
| 1949-50 | Walter Freeman | |
| 1950-51 | William M. Ballinger | |
| 1951-52 | Frank D. Costenbader | |
| 1952-53 | Wallace M. Yater | |
| 1953-54 | Herbert P. Ramsey | |
| 1954-55 | Preston A. McLendon | |
| 1955-56 | W. Ross Morris | |
| 1956-57 | Ralph M. Caulk | |
| 1957-58 | James W. Watts | |
| 1959* | W. LeRoy Dunn | |
| 1960 | Victor R. Alfaro | |
| 1961 | Donald Stubbs | |
| 1962 | J. Spencer Dryden | |

## Vice Presidents

| | First Vice President | Second Vice President |
|---|---|---|
| 1938-39 | William T. Gill | David Davis |
| 1939-40 | John J. Shugrue | Coursen B. Conklin |
| 1940-41 | R. Lomax Wells | Elizabeth E. Chickering |
| 1941-42 | J. Lawn Thompson, Jr. | Grace G. Purse |
| 1942-43 | Thomas S. Lee | Alma J. Speer |
| 1943-44 | Custis Lee Hall | Carolyn Pincock |
| 1944-45 | William M. Ballinger | K. Elizabeth Parker |
| 1945-46 | Fred A.J. Geier | Dorothy S. Jaeger |
| 1946-47 | A. Clagett Gray | Catherine W. Johnson |
| 1947-48 | Ivy A. Pelzman | Carolyn Pincock |
| 1948-49 | Charles P. Howze | Caroline Jackson |
| 1949-50 | Samuel M. Dodek | Dorothy S. Jaeger-Lee |
| 1950-51 | J. Bay Jacobs | Helen Gladys Kain |
| 1951-52 | W. Ross Morris | Ester A. Nathanson |
| 1952-53 | Maurice A. Selinger | Cecile L. Fusfeld |
| 1953-54 | Zigmond M. Lebensohn | Alma J. Speer |

---

* Beginning with 1959 the terms of all officers were changed from the fiscal year to the calendar year.

| | | |
|---|---|---|
| 1954-55 | Paul R. Wilner | Margaret M. Nicholson |
| 1955-56 | Milton M. Greenberg | Dorothy M. Dowd |
| 1956-57 | Irving Burka | Shirley S. Martin |
| 1957-58 | Duane C. Richtmeyer | Dorothy B. Holmes |
| 1959 | Edward W. Nicklas | Fofo Mezitis |
| 1960 | Theodore J. Abernethy | Petrena Abbe Shea |
| 1961 | Clarence K. Fraser | Josephine E. Renshaw |
| 1962 | Frank S. Pellegrini | Naomi M. Kanof |

### Chairmen of the Executive Board

| | | | |
|---|---|---|---|
| 1938-42 | Francis X. McGovern | 1951-52 | Raymond T. Holden |
| 1942-43 | William J. Mallory | 1952-53 | John Minor |
| 1943-44 | Raymond T. Holden* | 1953-54 | Walter Freeman |
| 1944-46 | Henry R. Schreiber | 1954-57 | Wallace M. Yater |
| 1946-47 | A. Magruder MacDonald | 1957-58 | Herbert P. Ramsey |
| 1947-48 | Fred R. Sanderson | 1959 | Preston A. McLendon |
| 1948-49 | William M. Ballinger | 1960 | W. Ross Morris |
| 1949-50 | William Earl Clark | 1961 | Milton M. Greenberg |
| 1950-51 | William P. Herbst, Jr. | 1962 | James W. Watts |

* Lieutenant Commander Holden was commissioned in the United States Navy on July 21, 1943. He submitted his resignation as Chairman of the Board on July 21. Acting Chairman of the Board for the remainder of the year was Dr. William P. Herbst. Commander Holden became a Captain in the Navy, holding the highest rank in that branch of the Service of any physician from the District of Columbia during World War 11.

### Delegates to the American Medical Association

| | |
|---|---|
| 1929-43 | Henry C. Macatee |
| 1943-49 | Coursen B. Conklin |
| 1947-53 | Herbert P. Ramsey |
| 1950-56 | Hugh H. Hussey |
| 1953- | Raymond T. Holden |
| 1957-59 | Victor R. Alfaro* |
| 1959-61 | Ralph M. Caulk |
| 1962- | C. Willard Camalier, Jr. |

* Dr. Edward W. Nicklas, Alternate Delegate, substituted for Dr. Alfaro at the 1957 Clinical Session of the American Medical Association in Philadelphia.

### Executive Director and Secretary-Treasurer

1938-62 Theodore Wiprud

### Certificate for Meritorious Service

The Certificates were awarded each year to a member or members of the Medical Society in recognition of distinguished service to the profession and to the citizens of Washington.

| | |
|---|---|
| 1941 | Edward Y. Davidson |
| 1942 | Francis X. McGovern |
| 1943 | John B. Nichols |
| 1944 | Arnold McNitt |
| 1948 | Henry C. Macatee |
| 1948 | Joseph S. Wall |
| 1948 | Arthur C. Christie |
| 1949 | Charles S. White |
| 1949 | William J. Mallory |
| 1950 | Harry H. Kerr |
| 1950 | Arch L. Riddick |
| 1950 | Frederick C. Fishback |
| 1951 | Edgar P. Copeland |
| 1952 | A. Magruder MacDonald |
| 1952 | William Cabell Moore |
| 1952 | Frank D. Costenbader |
| 1953 | William P. Herbst, Jr. |
| 1953 | Mr. Theodore Wiprud |
| 1954 | Daniel LeRay Borden |
| 1954 | James A. Gannon, Sr. |
| 1955 | William Earl Clark |
| 1955 | Addison M. Duval |
| 1956 | Margaret M. Nicholson |
| 1957 | Wallace M. Yater |
| 1958 | Donald Stubbs |
| 1959 | Herbert P. Ramsey |
| 1960 | C. Willard Camalier, Jr. |
| 1961 | Preston A. McLendon |

### Robins Award

Given to a physician by the A.H. Robins Company of Richmond, Va., in recognition of distinguished community service.

1961 Herbert S. Gates

# Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help—for these four very good reasons:

**Appeal** With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Many patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

**Nourishment** Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

**Convenience** Within 4 minutes a bowl of delicious soup is heated and ready to eat.

**Economy** Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

Campbell's
CONDENSED
SOUP

You can't treat one without the other.

# A triumph over trichomoniasis

The male urogenital tract is by far the main source of reinfection in trichomonal vaginitis.

It follows that neglecting to treat infected male partners of women with trichomonal vaginitis invites therapeutic failure.

Just as Flagyl is the best agent available for eradicating trichomonal infection from extravaginal sites in women, it is the only agent capable of eradicating demonstrated trichomonal infection in men.

Because of published reports of consistently high cure rates—often up to 100 percent—and a relatively low incidence of side effects, Flagyl has become the agent of choice for trichomonal vaginitis.

*Indications:* For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture.

*Contraindications:* Evidence of or a history of blood dyscrasia, active organic disease of the central nervous system and the first trimester of pregnancy.

*Warnings:* Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

*Precautions:* Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

*Adverse Reactions:* Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

**Dosage and Administration:** *In the Female.* One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

| **Dosage Forms:** | | |
|---|---|---|
| | Oral tablets | 250 mg. |
| | Vaginal inserts | 500 mg. |

References available on request.

**Flagyl®**
metronidazole

**care for the pair in trichomoniasis**

SEARLE
Distributed by
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680
*Research in the Service of Medicine*

**Thorazine®**
brand of **chlorpromazine**

**versatility**
**quality**
**experience**

NOW
THERE'S PRICE

Smith Kline & French Laboratories **SK&F**

# President's Page

## COME YE LET US GATHER . . .

Although it is true that numerous other meetings of special interest are continually being held, there is a definite need for a continuing education program in the District of Columbia to deal with the problems unique to our area. Not only do we have the routine problems of urban environment, but we have special problems in the health field related to poverty, unemployment and lack of education. We have the problems of a mass transient population (tourists) and a sizable international influx which brings to our community potential problems from abroad. In addition, we have jurisdictional problems between the District of Columbia, Maryland, and Virginia as well as strong limitations placed upon the District by Congress.

These special problems have caused us to consider variations in our thinking about a scientific program.

The 1971 Scientific Assembly to be held at the Statler Hilton Hotel on September 23 and 24, 1971, will reflect several changes. First, the Assembly has been reduced to two days so that a highly concentrated program of excellence can be presented to the membership. The meetings will consist not only of outstanding national specialists speaking on pertinent health issues, but will also include discussions on various socio-economic problems. The broad concern all of us have for the ever-increasing malpractice insurance rates is reflected prominently in our program. The various philosophies regarding national health insurance will be brought into clearer focus. Peer review, quality of care, and problems in licensing and re-licensing will also be included in the program.

Our 1971 Scientific Assembly, under the leadership of Dr. John Lynch, supported by Program Chairman, Dr. Jay Shapiro and Exhibit Chairman, Dr. William Funderburk, is taking final form. It promises to be a challenge to our thinking, an inkling toward the future, and a worthwhile experience for us all.

I am counting on your participation.

Marvin C. Korengold

# Thank You, Doctor

*P.S. AAMA bylaws provide that the association, "is not, nor shall it ever become a trade union or collective bargaining agency."*

Your continuing cooperation with the American Association of Medical Assistants has been generous. With your support our organization has achieved a membership of 14,000 medical assistants in more than 400 chapters in 45 states, District of Columbia and Puerto Rico.

Since our first organizational meeting 15 years ago, we have worked toward the primary goal of providing educational opportunities to the medical assistant in the doctor's office. In a short decade and a half the association has:

- Established and conducted a certification program as an incentive to self-education.
- Developed curricula for medical assisting programs in hundreds of junior and community colleges.
- Carried on a continuing education program for medical assistants through seminars, workshops and a professional bi-monthly journal.
- Published career materials and established a scholarship loan fund to help recruit future medical assistants.
- Cooperated with AMA in public relations efforts beneficial to the medical profession as a whole.

But our work cannot stop here. As the only national association for medical assistants, AAMA is eager to contribute to advancement of this allied health field. We would like to share our educational programs with all of the medical assistants across the nation. But to do this we need the co-operation of many more physicians.

If your medical assistant is not a member of AAMA, please fill out this coupon today. Her greater knowledge of medical assisting will be your reward.

**American Association of Medical Assistants**

I wish to inquire about membership for my medical assistant in the American Association of Medical Assistants, Inc. Please have someone send more information to:

Name ______________________________

Business Address ____________________ Phone ____________
(Street)

City ____________ State ____________ Zip ________

Member of county medical society: Yes ________ No ________

County ____________________

Name of Assistants: Address:

____________________ ____________________

____________________ ____________________

____________________ ____________________

____________________ ____________________

Clip and mail to:

**American Association of Medical Assistants**
One East Wacker Drive
Chicago, Illinois 60601

# Editorials

## Veteran Heroin Addicts in Washington: A Preliminary Report

Prior to the winter of 1970-71, few people thought of a relationship between military service and heroin addiction. Several reports appeared during that winter about the widespread use of heroin by American soldiers in Vietnam. The following May, two Congressmen visited Vietnam, dramatically focusing national attention on heroin use there. A few weeks later the President acknowledged the problem in a long reply to a question in a nationally televised White House press conference. Shortly thereafter, on June 17, 1971, the President announced a major national commitment to deal with heroin addiction. He emphasized the problem of the addicted veteran and termed drug abuse America's "public enemy number one."

Although the link between military service and heroin addiction is suddenly commonplace, there is remarkably little known about it. This paper attempts to shed some light on the problem by looking at it from the perspective of a large urban heroin addiction treatment program. What percentage of addicts brought to jail are veterans? When and where did veterans begin to use heroin?

### Method

The Narcotics Treatment Administration (NTA) was the multimodality heroin addiction treatment program of the District of Columbia Government. NTA's computer-based intake included not only government-operated heroin addiction programs but also most private heroin addiction treatment programs in the City. Operations began in February 1970, and on July 2, 1971, 16 facilities were seeing 3,354 heroin addict patients in continuing treatment. About 60% of the patients, received methadone maintenance treatment. Twenty-percent were being detoxified with methadone, and 20% were participating in abstinence programs, receiving no methadone. Seventy-six % were voluntary, walk-in patients and the remainder were referred from agencies of the criminal justice system including the Bail Agency, and the Departments of Parole and Probation. Ninety-five % of NTA patients were Black, 67% were under 25 years old, and 74% were males. Early in 1971 NTA estimated that there were about 17,000 heroin addicts in the city or about 2.2% of the population of the District of Columbia.[1]

In August 1969, a pilot study was carried out at the District of Columbia jail to learn about drug abusers who were being brought to the jail. Two hundred and twenty-five men were interviewed and asked to give urine samples to determine drug use[2]. They were also asked about their military service.

In January 1971, 159 men newly admitted to the D. C. jail were interviewed about their drug use. Urine samples were taken. These men were also asked about their military service.

From June 7 to June 18, 1971, 404 NTA patients were interviewed on initial intake or at the time they were reissued I.D. cards after 6 months of treatment. A sample of 184 of these individuals was asked whether they were veterans, and if they responded affirmatively they were given a more extensive questionnaire about their military experience.

These 3 samples formed the basis for the current study.

### Results

In the 1969 Jail Study, 225 newly admitted men were interviewed and urine samples were analyzed to determine drug use. One hundred (45%) were heroin addicts. Twenty-four % of the addicts and 29% of the non-addict inmates reported that they were veterans. About half of each group reported that they spent 2 years or less in the Service and about 70% of each group reported honorable discharges.

In the 1971 Jail Study a sample of 159 consecutively admitted men were interviewed and gave urine specimens. Forty-seven % were heroin addicts and an additional twenty-one % reported using heroin often but not daily. The latter were called "chippers". Thus, only 32% reported no current heroin use. The veterans status of the 3 groups was: addicts (26%), chippers (20%), and non-users (25%).

Of the 404 patients coming through intake from June 7 to June 18, 1971, a sample of 184 were asked about their veteran status. A total of 23 (12.5%) said they were veterans and of these, 17 were interviewed more thoroughly. The 184 were considered representative of the entire group of 404 and the 17 were considered representative of the 23 self-reported veterans. The selection related to the schedule of the interviewer and appeared to be random, although no further statistical analysis was made.

Sixteen of the 17 veterans were Black and 1 was White; all were men. Their average age was 28. Seven had completed the 12th grade in school, and 1 had attended college for 2 years.

Thirteen had been arrested at least once and 7 had been arrested 5 or more times. Nine had received convictions on the charges for which they were arrested and 3 had received 5 or more convictions.

Eleven had served in the Army, 3 in the Air Force, 2 in the Navy, and 1 in the Marines. Ten had enlisted; the remaining 7 had been drafted. Thirteen had served 2 year tours of duty while 1 served for 9 years. Thirteen had served two year tours of duty while one served for nine years.

Fourteen (82%) received honorable discharges, two received general discharges and one was released from duty after one year with an undesirable discharge because of heavy drug use.

While in the military service, 6 of the 17 veterans had spent some time in a stockade. Of the 6, 1 was in a stockade twice and another was locked up 7 times. Their charges were: AWOL 2, fighting 2, drugs 1, robbery 1.

Five of the 17 first used heroin before entering the Service (Table 1).

TABLE 1: Pre-Service Drug Usage

| | Number | Per cent |
|---|---|---|
| Marijuana | 7 | 41% |
| Hashish | 3 | 18% |
| Heroin | 5 | 29% |
| Cocaine | 3 | 18% |
| Amphetamines | 2 | 12% |
| Barbiturates | 1 | 6% |
| Hallucinogens | 1 | 6% |
| Not using illicit drugs | 9 | 53% |
| Total veterans | 17 | |

Four more began heroin use while in the Service. Two first used heroin in Korea, 1 in Germany, and 1 while stationed in the Southwestern United States.

Eight of the 17 first used heroin after leaving the Service (Tables 2 and 3).

TABLE 2: In-Service Drug Use

| | Total In-Service Usage | | Initial Usage In-Service | |
|---|---|---|---|---|
| | Number | Percent | Number | Per cent |
| Marijuana | 4 | 24% | 2 | 12% |
| Hashish | 3 | 18% | 1 | 6% |
| Heroin | 9 | 53% | 4 | 24% |
| Cocaine | 4 | 24% | 2 | 12% |
| Amphetamines | 1 | 6% | 0 | 0% |
| Barbiturates | 1 | 6% | 0 | 0% |
| Hallucinogens | 0 | 0% | 0 | 0% |
| Not using illicit drugs | 5 | 29% | | |
| Total veterans | 17 | | | |

TABLE 3: Post-Service Drug Use

| | Total Post-Service Usage | | Initial Usage Post-Service | |
|---|---|---|---|---|
| | Number | Percent | Number | Per cent |
| Marijuana | 11 | 65% | 2 | 12% |
| Hashish | 4 | 24% | 2 | 12% |
| Heroin | 17 | 100% | 8 | 47% |
| Cocaine | 14 | 82% | 7 | 41% |
| Amphetamines | 6 | 35% | 6 | 35% |
| Barbiturates | 1 | 6% | 1 | 6% |
| Hallucinogens | 1 | 6% | 1 | 6% |
| Not using illicit drugs | 0 | 0% | | |
| Total veterans | 17 | | | |

While on active duty in the military service, 9 men used heroin. The locations of use while in the Service were: Northeast U. S. 1, Southeast U. S. 5, Southwest U. S. 1, Germany 3, Okinawa 1, Korea 2, Vietnam 2. Several used heroin in more than one location. Two of the men reported use while in combat.

One man reported that he was treated for a heroin overdose reaction while in the Service, and 6 others received some treatment for addiction after leaving the Service but before coming to NTA. The remaining 10 reported no previous treatment.

### Discussion

The 3 samples reported here are each small. Any conclusions drawn from them must be tentative.

However, it appears from these data that the problem of heroin addiction which Washington, D. C. is facing is not a direct result of heroin addiction acquired in military service. The large majority of Washington heroin addicts became addicted in their late teens or early twenties in the District of Columbia. Only 3 % of heroin addicts coming to NTA's central intake facility in June 1971 first used heroin while on duty with a branch of military service.

Secondly, those heroin addicts who were veterans became addicted in many parts of the world over many years. Thus, the problem of American servicemen becoming addicted to heroin was not new nor was it related exclusively to military service in any one part of the world. It was particularly striking that of the 15 locations, veterans reported heroin use while in the Service, 7 were in the continental United States.

One puzzling aspect of these results is that about one out of 4 addicts brought to the Jail in both the August 1969 and the January 1971 samples were veterans even though only 1 NTA patient in 8 was a veteran. The apparent underrepresentation of veterans in the patient group cannot be accounted for by veterans using other treatment programs, since the NTA intake includes almost all non-governmental programs treating heroin addicts. At the time of the study, the veterans administration program in Washington was treating only about 30 patients.

An earlier study showed that Washington experienced a dramatic increase in heroin addiction in the late 1960's. Although Washington has had heroin addicts for many years, more than half of the currently addicted individuals first used heroin after 1965. This has been called Washington's heroin epidemic. Preliminary statistics from other cities suggest that the Washington experience is typical of many other urban areas. Similarly, it may be that there has been an explosion of heroin addiction in Vietnam among our military in the last year.

A total of 1,352 veterans returned to the District of Columbia during calendar year 1970. Four hundred and sixty-three more veterans were returned to the District of Columbia during the first 6 months of 1971. The corresponding figures for 1968 and 1969 were 1,459 and 1,357. Assuming that 20% of the 1970 veterans were heroin addicts, this would add 270 new addicts or less than 2% to the current estimated total of nearly 17,000 addicts. Recently, addicted individuals are less likely to seek treatment than more chronically addicted individuals. Thus, returning veterans who have recently become addicted may not show up in treatment programs for several months or even years.

On July 30, 1971 Dr. Jerome Jaffe, the Director of the White House Special Action Office for Drug Abuse Prevention, reported that 5.4 % of servicemen leaving South Vietman were heroin users. This figure was based on 39,400 urine tests given during the preceding 6 weeks.[3] This new estimate suggested that only about 73 Vietnam veteran addicts came to Washington during 1970.

If American cities are significantly flooded by a number of new addicts from Vietnam, this increase will come on top of a massive and largely untreated epidemic of urban heroin addiction. One to two hundred new addicts added to the Washington epidemic over a 12 month period would contribute relatively little to the city's heroin addiction problem. This situation may be typical of other major urban areas.

The implications of even a 5.4 % rate of addiction in returning veterans may be quite different in areas of the country which have previously had a small or non-existent heroin addiction problem. In these communities the addiction of even a few addicted servicemen may create the focus for the introduction and spread of the epidemic of heroin addiction.

ROBERT L. DUPONT, M.D.
*Director Narcotics Treatment Administration*
*Department of Human Resources*

### References

1. DUPONT, ROBERT L., Profile of a heroin addiction epidemic. New Eng. J. Med., 285, 6, 320.
2. KOZEL, NICHOLAS J., BROWN, BARRY S., and DUPONT, ROBERT L., A study of narcotics addicted offenders at the D. C. Jail. Internat. J. Addict. (in press).
3. SIMS, JANE, HEW Treatment of Heroin Addicts Assailed in House. *The Washington Post*, July 31, 1971.

**NURSES REGISTRY**
LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**

# D.C. HEALTH NOTES

## Venereal Disease in the District of Columbia

The rise in the incidence of venereal disease, principally gonorrhea, in the District of Columbia has resulted in a 48% increase (13,955 to 20,604) in the clinic admissions and a 22% increase (25,733 to 31,501) in the number of visits from year 1965 to 1969. Treatment to infected persons rose from 17,161 to 25,183.

Although the Community Health Services Administration operated clinics for venereal disease prior to 1965, a reporting system for the number of admissions and visits and treatments administered was not established until that year. Presently, the Administration operates two outpatient VD clinics–Northwest Central Health Center and Area C Health Center. Also, a physician routinely visits the D.C. Jail to care for the inmates.

Gonorrhea cases have been rising nationally with more than 2,000,000 cases reported in 1970 and in some areas have reached epidemic proportions. The District of Columbia reflected an increase in gonorrhea cases during the sixties. The 13,947 cases reported in 1969 were an increase of 14 per cent from the 12,231 cases reported in 1968. The nationwide increase was 15%.

Case rates for gonorrhea have been increasing in the District since 1967, but the most rapid rise occurred among the white population, both male and female.

Public health specialists feel that the increase has been due largely to increases in the number of teenagers moving into the District from different parts of the country. According to the American Medical Association one teenager is infected nearly every minute in the United States.

In fiscal year 1960, the ratio of case rates, male to female, was 1 to 0.8. The reasons that this ratio is not closer to 1 has been explained by "Today's VD Control Problem" American Social Health Association which reported that in 19 states and 44 cities 20% of infected males had homosexual contacts. Since 1963, however, the ratio in the District of Columbia has been 1 to 0.3 or lower, indicating that many of the cases among women go undetected. By applying the ratio of 1 to 0.8 to the reported male cases in 1969, the estimated number of female cases is 8,228. Only 3,661 female cases were actually reported in 1969. The 4,500 missing cases may have received treatment, but were not reported, or worse, received no treatment and are free to spread the infection still further.

Private physicians in the District reported 636 or 4.6 per cent of the total gonorrhea cases in 1969. Nearly one-third of these cases were White. In constrast, only 5% of the cases reported by public sources were White.

Currently, a smear for gonorrhea is taken from each woman receiving prenatal or postpartum care at clinics of the Community Health Services Administration. Also new patients at the birth control clinics are tested for gonorrhea at the time of the initial visit and at the time of the annual check-up visit.

Early in the decade only 42% of all syphilis cases in the District were reported in an early stage of the disease. By 1968, however, cases in the early stage had increased to 62% of all syphilis cases reported. Primary and secondary stages were 36% and early latent 26 %. Although this increase is commendable, more intensified epidemiology is needed to find even more of the cases in the early stages. The 38 per cent of cases in the late stages of syphilis in 1969 demonstrates this need.

The lowest number of infectious syphilis cases reported in the decade was in 1966 at 468. Reported cases of 772 in 1968 was the highest of the decade. In 1969 only 539 cases were reported. The increase in reported infectious syphilis cases from 1964 to 1968 was principally a result of better epidemiology and was not an indication of increasing syphilis incidence. Likewise, the reduction in 1969 does not necessarily reflect a decline in syphilis cases.

In the District of Columbia, infectious syphilis is chiefly a disease among young adults; 46% or 248 of the 539 cases in 1969 were between 20 and 29 years of age. A breakdown by sex indicates a greater proportion of women with infectious syphilis under 29 than of men. This was the case in all 10 years. In the early sixties, 3 public cases to one private case of syphilis were reported. By 1969, the ratio was 4 to 1.

A small number of the syphilis cases reported in the District of Columbia each year are congenital. In 1969, for example, there were 21 cases, less than reported during any of the previous nine years. The decrease occurred among patients over 9 years of age, a group constituting 81% of the congenital cases. Serological testing of pregnant women, a District-wide requirement since the mid-fifties, may be responsible for this decline. The fact that most congenital cases are reported in patients over 9 is not unique. Nationally about 85 per cent of the congenital cases are over 9 years old.

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*Associate Director, Department of*
*Human Resources*

**RAYMOND SCALETTAR, M.D., F.A.C.P.**

**Associate Editor, Medical Annals of the District of Columbia**

The Executive Board of the Medical Society of the District of Columbia takes great pleasure in announcing the appointment of Dr. Raymond Scalettar as Associate Editor of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA effective July 1, 1971.

A native of New York City, Dr. Scalettar received his medical degree from the State University of New York, Downstate Medical Center and served his internship and residencies at the Walter Reed Army Medical Center. Following his residency, he simultaneously served as Chief of the Arthritis Clinic and Chief of General Medical Section #3 at Walter Reed. At the conclusion of his military career he was recipient of Walter Reed's Certificate of Achievement, cited for his "outstanding ability as a clinician, teacher and supervisor" and for "materially assisting the training program as an instructor for students, interns and residents assigned to him."

Among his many distinctions, Dr. Scalettar has been President of the Rheumatism Society of the District of Columbia, 1961-62; personal physician to the Vice-President of the United States, 1960; Chairman of the Medical Service Committee for the Medical Society of the District of Columbia since 1969; and has served as a delegate in various capacities for the American Society of Internal Medicine. More recently, he is serving as Alternate Delegate to the American Medical Association for the Medical Society of the District of Columbia. He also chaired the highly successful Winter Dinner Meeting held at the Mayflower Hotel in March of this year.

Currently, Dr. Scalettar is the Senior Attending Physician and Chief of the Rheumatic Disease Section at the Washington Hospital Center. He is Clinical Assistant Professor of Medicine at the George Washington University Medical Center and is also affiliated with Sibley Memorial Hospital.

Author of many articles dealing mainly with Arthritis and Rheumatism, Dr. Scalettar practices with the Washington Internal Medicine Group, located at 2400 H Street, N.W., Suite 7, Washington, D. C.

He is married to the former Nada Vodenlitch, and they reside in Rockville, Maryland with their two children Lydia, 12, who attends Farmland Elementary School; and Mark, 8, who attends the McLean School, Inverness Campus. In his limited leisure time, Dr. Scalettar enjoys playing tennis and reading best selling novels.

# D.C. MENTAL HEALTH ADMINISTRATION

## Suicide Prevention in the Nation's Capital

Three hundred and sixty-eight persons died by their own hands in the Nation's Capital from 1956 through 1970. Studies show that one-third of all individuals who commit suicide make at least one unsuccessful attempt. In addition, attempts are about 9 times the number of suicidal deaths. Attempts are not officially recorded, but it would be safe to estimate that over 700 suicidal attempts occur in the District of Columbia each year.

**Deaths by Suicide in the District of Columbia**
1956 - 1970

| Year | Deaths by Suicide |
|---|---|
| 1956 | 86 |
| 1957 | 83 |
| 1958 | 98 |
| 1959 | 84 |
| 1960 | 70 |
| 1961 | 89 |
| 1962 | 101 |
| 1963 | 98 |
| 1964 | 109 |
| 1965 | 83 |
| 1966 | 82 |
| 1967 | 98 |
| 1968 | 71 |
| 1969 | 82 |
| *1970 | 45 |

* Unofficial.

## The Suicide Prevention and Emergency Mental Health Consultation Service

"I have so many problems." The voice began to waver. "I don't know if I can tell you, but I am afraid I'm going to kill myself!"

This desperate woman made one of the 1,023 suicidal telephone calls in June to the Suicide Prevention and Emergency Mental Health Consultation Service. A week before she had impulsively taken an overdose of medication when her husband walked out taking their 8-year-old daughter. Firmly, with reassurance and compassion the counselor guided her into talking about the problems, fears and anxieties, attempting to keep the thin line of communication open until the caller felt some relief. After twenty-five minutes the counselor and the caller were talking about positive steps for living.

In 1965 the Department of Public Health initiated the Suicide Prevention and Emergency Mental Health Consultation Service. The program, now under the Department of Human Resources, Mental Health Administration has as its goals:

1. Prevention of the fatal outcome of suicidal acts
2. Prevention of the repetition of suicidal acts
3. Prevention of the first suicidal act
4. Preventing the desire to attempt suicide.

Not all the calls received pertain to suicide. In fiscal year 1971, 4,428 of the total 12,448 telephone inquiries were concerning alcoholism, drug addiction, depression, psychosis, marital discord and all the incalculable problems of human beings in their day-to-day living experiences. The counselors provide a beginning treatment experience for the distressed individual. The availability of the telephone at 629-5222 places within anyone's reach, just a phone call away, contact with a knowledgable counselor who will evaluate the situation, provide guidance, advice, emotional support, and motivation to help the distressed to effectively deal with their crises.

The program is staffed around the clock, 7 days a week by a select and specially trained group of 10 nursing personnel. In implementing its activities, Mrs. Phyllis K. Clemmons, R.N., the Director, has established an Emergency Response Team whose task is to investigate crises and evaluate in the case of individuals who are allegedly mentally ill and likely to injure themselves or others, but who are unwilling or unable to seek the necessary emergency mental health care. The 2 registered nurses are designated agents of the Department of Human Resources, authorized to act within the provisions of the D. C. Code, 1967 Edition, Section 21-521, in which they may "take into custody without a warrant, individuals believed to be mentally ill and likely to injure themselves or others if not immediately detained and make application for their admission to a public or private hospital for emergency observation and diagnosis."

As the District's Mental Health programs increase in scope and effectiveness, the Mental Health Administration would like to focus on the high risk groups of suicide attempters and the survivors of suicide victims. The program will then help prevent repetition of suicidal acts and hopefully prevent many from making the first suicidal attempt.

## Suicide and The Physician

Suicide among physicians is extremely high. Records of the Suicide Prevention and Emergency

# The girth control pill

# Tepanil® Ten-tab®

(continuous release form)

## (diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

**Contraindications:** Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

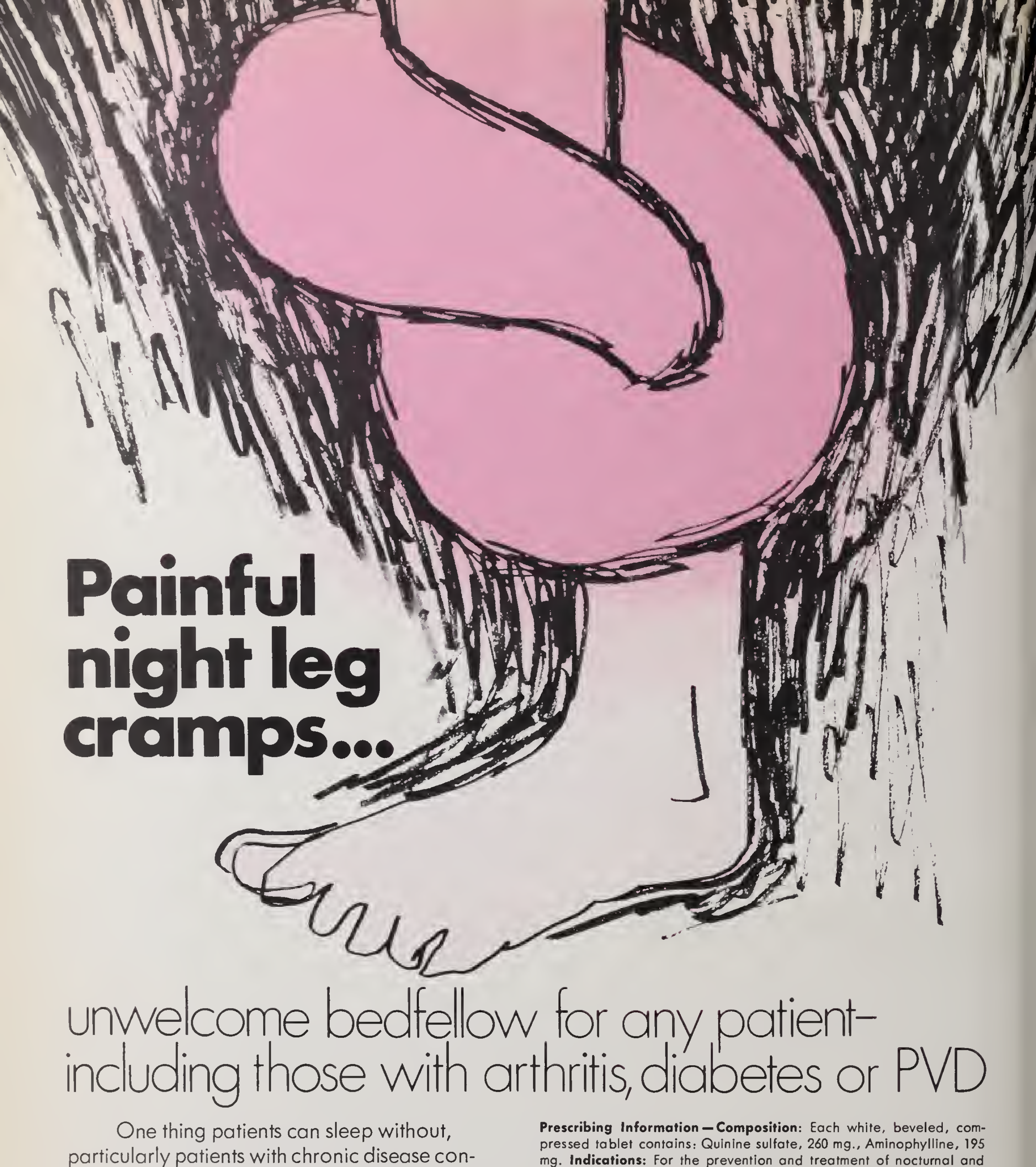
**Warning:** Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

**Adverse Reactions:** Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T 107/4/71/U S PATENT NO 3 001 910

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON·MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144



# Painful night leg cramps...

## unwelcome bedfellow for any patient—including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

**Prescribing Information — Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

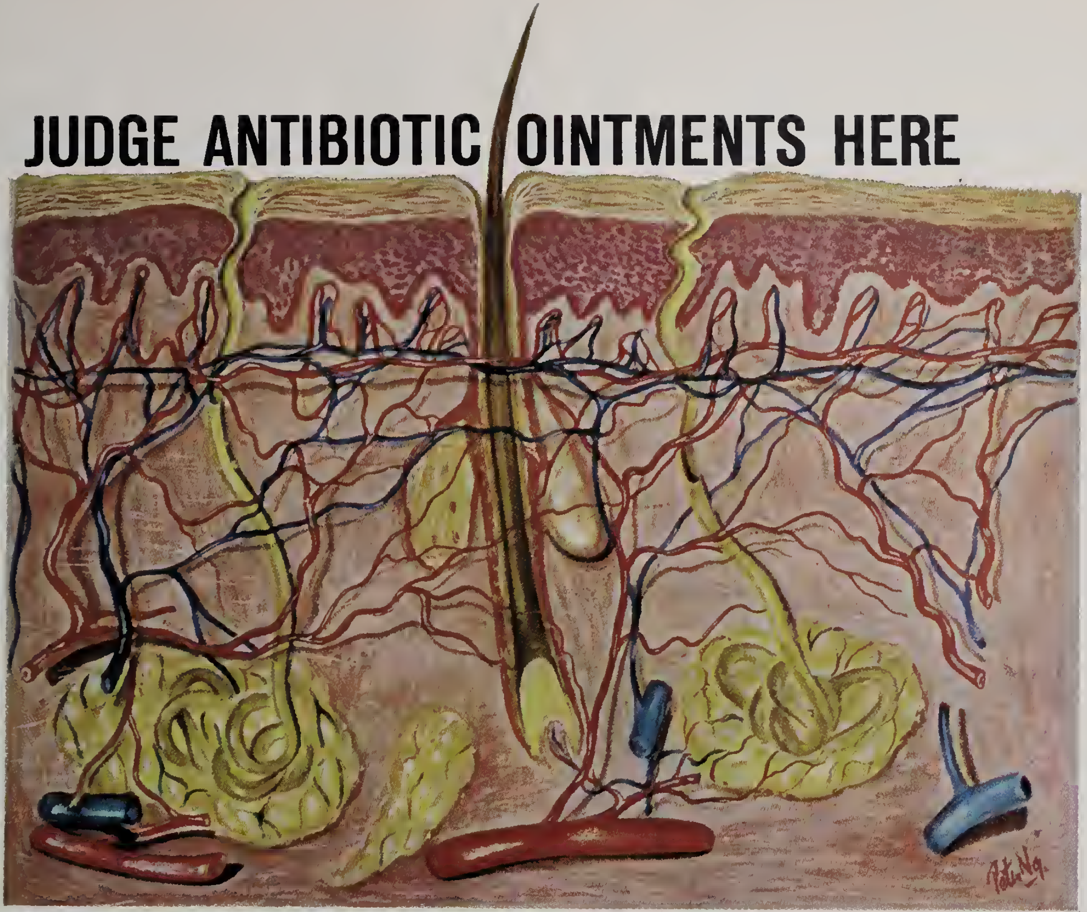
**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**

Q103 2/71

**Quinamm**™ Specific therapy for night leg cramps

(quinine sulfate 260 mg., aminophylline 195 mg.)

JUDGE ANTIBIOTIC OINTMENTS HERE



**Results on skin are final proof of any topical antibiotic's effectiveness**

**No in vitro test can duplicate a clinical situation on living skin.** 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

**Caution:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

**Contraindications:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

**Supplied:** Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

**'NEOSPORIN'®**
brand

**POLYMYXIN B-BACITRACIN-NEOMYCIN**
**OINTMENT**

**BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.**

gastritis

# when G-I symptoms demand a potent synthetic nticholinergic

# move up to "the Robinul response"

**In treating hypersecretion and hypermotility associated with gastritis are you disappointed in the results you've been getting with some of the synthetics? Then *move up* to a potent anticholinergic—Robinul® Forte (2 mg. glycopyrrolate). It provides prompt, pronounced, prolonged suppression of gastric hypersecretion, making it a highly effective agent in gastritis and other upper G-I conditions associated with hypersecretion and hypermotility. Because Robinul Forte exerts a profound antispasmodic action, it is also useful in the treatment of lower G-I disorders, such as functional bowel distress and spastic and irritable colon. If the patient has a "one tract mind" concerning his condition, you can help control the anxiety and tenseness by prescribing Robinul®-PH Forte (2 mg. glycopyrrolate with 16.2 mg. phenobarbital —warning: may be habit forming).**

# Robinul® 2mg. Forte (glycopyrrolate)

IDICATIONS Robinul Forte (glycopyrrolate, 2 mg.) and Robinul-PH Forte are double-strength dosage forms of glycopyrrolate. They are primarily
cated for patients who are less responsive to anticholinergic therapy and for control of the more prominent symptomatology associated with
e episodes of gastrointestinal disorders. Emphasis should be on total management, with due consideration of the various therapeutic modalities
able, including diet, antacids, anticholinergic agents, sedatives, and attention to emotional problems. Accordingly, glycopyrrolate is recom-
ded in the management of gastrointestinal disorders amenable to anticholinergic therapy, such as: (1) duodenal ulcer, duodenitis, pylorospasm;
gastric ulcer, gastritis, esophageal hiatal hernia, hyperchlorhydria, pyrosis, aerophagia, gastroenteritis; (3) esophagitis; (4) cholecystitis, chronic
creatitis; (5) spastic and irritable colon, ulcerative colitis, functional bowel distress, diverticulitis, acute enteritis, diarrhea; and (6) splenic flexure
rome, neurogenic gastrointestinal disturbances. When these conditions are associated with psychic overlay, the formulation with phenobarbital
be indicated. ■ CONTRAINDICATIONS Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric reten-
prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH
e (glycopyrrolate with phenobarbital), sensitivity to phenobarbital. ■ PRECAUTIONS Administer with caution in the presence of incipient
coma. ■ SIDE EFFECTS The most frequent side effect noted during clinical trials was dry mouth. Thirty-three (3.3%) of 1,009 patients receiving
32 mg. of glycopyrrolate a day complained of dry mouth of moderate to severe degree, but only 11 discontinued treatment because of this.
red vision, constipation, and urinary hesitancy have been reported infrequently. Other side effects associated with the use of anticholinergic
s include: tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsi-
, and rash. ■ DOSAGE The average and maximum recommended dose of Robinul Forte (glycopyrrolate, 2 mg.) or Robinul-PH Forte is one
et three times daily (in the morning, early afternoon, and at bedtime). To obtain optimum results, dosage should be adjusted to the individual
ent's response. After the more severe symptoms associated with acute conditions have subsided, the dose may be reduced to the minimum
ired to maintain symptomatic relief. ■ SUPPLY Robinul Forte (glycopyrrolate, 2 mg.) is available as scored, compressed pink tablets engraved
/2 in bottles of 100 and 500. ■ Robinul-PH Forte (glycopyrrolate, 2 mg., with phenobarbital, 16.2 mg.) is available as scored, compressed blue
ets engraved AHR/2 in bottles of 100 and 500.

A. H. Robins Company, Richmond, Va. A·H·ROBINS

# The get-up-and-go summer cold and allergy pill.

Novahistine LP can help your patients get out and enjoy themselves in spite of allergic rhinitis, hay fever or summer colds. And even when nasal congestion is caused by repeated allergic episodes, Novahistine LP can usually give prompt and long-lasting relief. These continuous-release tablets contain a vasoconstrictor-antihistamine formulation that goes to work rapidly and lasts for hours. And convenient, twice-a-day dosage lets most patients enjoy relief all day and all night. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

**Novahistine® LP** decongestant

DOW THE DOW CHEMICAL COMPANY, Rx Pharmaceuticals, Indianapolis

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

# The bluest blue chip of them all.

Danny Sullivan never made the baseball team. But because he's had the right training, you'd be surprised at the number of jobs open to him.

The nicest part, of course, is that another handicapped person is getting the most out of his life.

However, there's something else good, too.

Vocational rehabilitation pays.

Every dollar spent to rehabilitate a person like him—someone with a physical or mental handicap—will increase his lifetime earnings by $35. (Thirty-five taxable dollars that he earns himself.)

Which is why vocational rehabilitation is good for everybody.

We call our program HURRAH. Actually, HURRAH stands for "Help Us Reach & Rehabilitate America's Handicapped."

When you realize there are five million handicapped people who can be helped by vocational rehabilitation, you can see what a big job is ahead.

If you want to know more about the job that vocational rehabilitation is doing, and the rich dividends it pays, write to HURRAH, Box 1200, Washington, D.C. 20013.

Ask for "Rehabilitation—A Blue Chip Investment." It's free.

Then if anyone ever asks you if rehabilitation is worth the cost, you'll know what we at HURRAH have found out:

From every angle, a human being is the bluest blue chip investment there is.

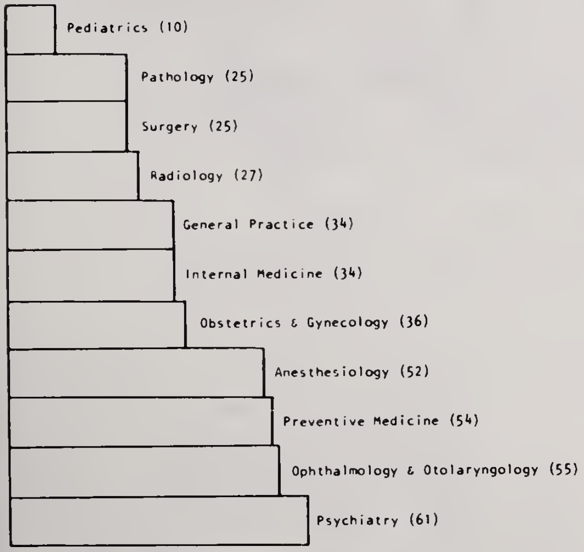
HURRAH. The State-Federal Program of Rehabilitation Services.

Help Us Reach & Rehabilitate America's Handicapped **HURRAH**

advertising contributed for the public good

The U.S. Department of Health, Education, and Welfare.

Suicide Rate For Physicians Per 100,000 Population



Mental Health Consultation Service show that 3 physicians killed themselves in 1969 and 3 in 1970. The United States suicide rate is 11 per 100,000 population. The rate for physicians as a whole in the United States is 36 per 100,000 population.

Physicians have certain personality traits which characterize capability but also predispose them to depression and suicidal feelings. They are taught to control emotional expression and give compulsive attention to detail. Emphasis is placed on conscientiousness and prolonged deferral of gratification. The increasing complexity of medicine and work pressures may be factors in pushing a physician to self-destruction. Again, poor physical health, loss of prestige and status problems with alcohol and drugs rank high in the reasons of the physician's disturbing suicide rate.

Most physicians do not seek help for their emotional problems, but take tranquilizers and try to work out their situational anxieties with mirror consultations. Baltes and Diamond recommend that physicians can contribute to the wellbeing of fellow physicians who have emotional problems through increased awareness of the need to:

1. *Exercise* enlightened compassion for a fellow-physician with emotional difficulty.
2. *Evaluate* his emotional status carefully along with routine physical examinations.
3. *Employ* increased responsibility for his emotional status and convey the need for professional attention to the problem.
4. *Recommend* trycyclic drugs for depression or tranquilizers for anxiety but to be used only under the guidance of consulting physician.
5. *Suggest* the need for psychiatric consultation for the physician with a severe emotional disturbance.
6. *Encourage* more selective pre-admission screening of medical students to detect those with poor emotional adjustment probabilities.

ESSEX C. NOEL III, M.D.
Director, D.C. Mental Health Administration

## References

1. BALTES, BERNARD J. AND DIAMOND, SEYMOUR: What is Your Emotional Image? Chicago, Illinois, 1969.
2. FREEMAN, WALTER: Psychiatrists Who Kill Themselves, presented at the American Psychiatric Association Meeting, Detroit, May 1967.
3. CLEMONS, PHYLLIS: Records, Suicide Prevention and Emergency Mental Health Consultation Service, 1971.
4. Public Law 88-597, 1964.

### The Physician's Role in Suicide Prevention

Public Law 88-597, 88th Congress, S. 935, September 15, 1964 states in part:

Any duly accredited officer or agent of the Department of Public Health of the District of Columbia, or any officer authorized to make arrests in the District of Columbia, *or the family physician of the individual in question,* (italics ours) who has reason to believe that an individual is mentally ill and, because of such illness, is likely to injure himself or others if he is not immediately detained may, without a warrant, take such individual into custody, transport him to a public or private hospital, and make application for his admission thereto for purposes of emergency observation and diagnosis (sec. 6. a).

The family physician must accompany the patient to the hospital.

Applications for Emergency Hospitalization are available from the Suicide Prevention and Emergency Mental Health Consultation Service and the Office of the Commission of Mental Health.

Staff members of the service will provide guidance and assistance in completing the application and information concerning available treatment resources. The telephone number is 629-5222.

R M K

*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

**MAXWELL AND TENNYSON INC.**

*Pharmacists*

916 Nineteenth Street, N.W.

SERVICE TO PHYSICIAN & PATIENT SINCE 1926

PHONES
223-4711
223-9797
223-9798

*KALORAMA CONVALESCENT HOME, INC.*

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE

for the medical management of the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W.
Adams 2-0063

# News & Personals

## SUMMARY OF EXECUTIVE BOARD ACTIONS

### Proceedings of the July 12 Meeting

Dinner was served for Board members in the Exhibit Hall of the Medical Society. Present were Drs. Henry D. Ecker, Chairman, James E. Boland, Warren D. Brill, C. Willard Camalier, Jr., John J. Hughes, Marvin C. Korengold and F.P. Ferraraccio, Secretary. Present by invitation was Dr. Raymond T. Holden.

The meeting was called to order by the Chairman at 7:30 p.m.

The minutes of the May 24 meeting were approved as submitted.

**Committee Meetings**: The Secretary reported the following committees met since the last meeting of the Board:

| | | |
|---|---|---|
| May | 27 | Medicine and Religion |
| | 28 | Public Welfare |
| | | Community Health Week |
| June | 1 | Medicolegal |
| | | Alcoholism |
| | 2 | Constitution and Bylaws |
| | 3 | Medical Bureau |
| | | Physician Placement |
| | 4 | Utilization |
| | 8 | Medical Ethics & Prof. Conduct |
| | | Board of Credentials |
| | 9 | Scientific Exhibits |
| | 10 | Society Insurance |
| | 14 | Membership |
| | 15 | Grievance |
| | 16 | Continuing Education |
| | | Legislative |
| | | Drug Abuse |
| | | Public Information & Education |
| | 24 | Traffic |
| July | 1 | Medical Bureau |
| | | Physician Placement |
| | | House & Building Fund |
| | 6 | Medicolegal |
| | 9 | Utilization |

**Special Meetings:**

| | | |
|---|---|---|
| June | 4 | RMP |
| | 9 | Emergency Medical Services |
| | 10 | Dr. Sanazaro |
| | 11 | Breakfast |
| | 15 | Emergency Medical Care |
| | 18 | 1972 Assembly Program |
| | 28 | Water Conference |
| July | 8 | 1971 Scientific Assembly Foundations Subcommittee |
| | 12 | Annals Subcommittee |
| | | Water Conference |

**Board of Credentials**: On recommendation of the Board of Credentials 9 members were elected to Active membership, 3 to Associate membership, 2 to Resident-Intern membership, and 28 to Student membership.

*Transfers*

*Active to Associate:* Harvey M. Cohen, Maurice McFarlane and Monochehr Sobhany

*Resident-Intern to Associate:* Robert Birschbach

*Resignations*

*Active:* Florence Grady

*Associate:* David Roseman

It was noted that student membership is increasing. The Secretary was asked to keep a running tabulation of all student applicants by school and also class breakdown by graduating year. Dr. Korengold expressed regret and concern that more students from Howard had not applied. He had addressed the medical students at both Georgetown and George Washington Universities by invitation, and at that time encouraged them to join the Society. An invitation to address the medical students at Howard is expected to be forthcoming at the beginning of the Fall Semester.

Dr. Korengold further reported that several committee assignments had been given to student applicants. These assignments are being delayed pending Board approval and summer's end.

A suggestion was made by Dr. Hughes that the presidents of the student bodies or the Student American Medical Association presidents from the three area medical schools be invited to attend the 1972 Scientific Assembly to be held at the Greenbrier, as guests of the Society. This suggestion was so noted by Dr. McCune, Chairman of the Executive Board for 1972.

**Committee on Liaison with Allied Professions**: The Board next considered the recommendation of this Committee regarding the definition of Nurse-Midwives, Dr. Camalier expressed concern over the wording and phraseology contained in this definition. The Board also considered the question of whether or not, according to the definition, nurse-midwives would be allowed to perform abortions. After further discussion, a motion was made and carried that Drs. Camalier and Hughes be appointed to an Ad Hoc Committee to reword and clarify the statement and return it to the Board by the next regularly scheduled meeting.

**Report on the Physical Fitness Seminar**: The Board agreed that the poor attendance at this year's Seminar was due to a poor choice of date and time, and also a conflict with a similar seminar being held at Georgetown. Discussion ensued as to whether the Seminar was worthwhile, vis-a-vis the expense.

Dr. Korengold reported that he had communicated with several leaders of the sports program at Georgetown, and that he and the Committee had made every effort to coordinate the two events. He also noted further stated that the seminar is considered very valuable by the high school aged group.

After consideration of the possibility of a joint effort for next year, it was decided that the Georgetown program would not be amenable to a cooperative effort. After further discussion, a motion was made and carried that since the time of the forthcoming meeting is not imminent, officers of the Society will meet with the appropriate people to discuss the complexities of the situation and will report at the next meeting of the Board.

**Blood Banks Committee Recommendation**: On recommendation of this Committee, a motion was made and carried that the Blood Banks Committee shall in the future be known as the "Blood and Tissue Committee." Matters pertaining to transfusions, transplantations, and the like, of all body tissues shall come under the province of this Committee.

**Section on Dermatology**: After discussion on the recommendation of this Section that it be recognized, the request was tabled pending clarification of the Constitution and Bylaws submitted by the Section.

**Symposium on Water Resourses of Metropolitan Washington**: It was reported that approximately 50 individuals attended this conference, the first in the Metropolitan Washington area of this nature. Many Society physicians attended in addition to members of the press. The Environmental Health Committee was commended for a "job well done."

**Society Sponsorship of a Television Program**: Dr. Korengold reported on a conference held by Mr. F. P. Ferraraccio, Dr. John Kishishian and Mr. Lou Brott held with Mr. Victor Brian at which time Mr. Brian proposed Medical Service endorsement and partial sponsorship of a TV program or public service announcement or a documentary. It was pointed out that at this time no financial commitment was being requested, but simply approval and endorsement for further exploration. It was noted that several years ago, Dr. Murdock Head had sponsored a documentary which was, in the Board's opinion, excellent. After a discussion, further exploration, as requested was approved.

**1971 Scientific Assembly**: Dr. Korengold reported on the Annual Scientific Assembly to be held on September 23 and 24. A Prayer Breakfast is being planned and the Board members were urged to attend. The Office Assistant Party is being held again this year. Dr. Korengold expressed the desire for all present to attend with their staffs. The Dinner Dance will also be held again this year and it is hoped that more Society members and their wives will attend. It was noted that the President of the AMA will be a guest speaker at the Assembly this year.

**Helicopter Ambulance Program**: Dr. Poole communicated with Dr. Korengold regarding this program requesting an opinion as to whether the Society's members would make contributions to the program. It was decided that the decision made at the January meeting of the Board regarding this program be upheld, however, clarification will be requested.

**Legislation**:

*Medical Records:* Dr. Korengold reported that hearings have not been scheduled as yet.

*Licensure:* Testimony was presented before the House of Representatives and the Senate. It is currently still in the Senate Committee.

*Corporate Practice:* Some Congressmen were against the Bill unless every professional will pay the franchise tax whether he incorporates or not. It was reported that New York has changed their incorporation act so that every individual eligible for incorporation must pay a franchise tax. A meeting was established for further discussion.

**Drug Abuse Center at the Psychiatric Institute:** A complete Drug Abuse Center has recently been opened at the Psychiatric Institute located at 21st and K Streets, N.W., for 30 day treatment. This is the first full scale comprehensive center on drug abuse. The Institute had sent an announcement letter to this effect to Dr. Gould, Chairman of the Ethics Committee, for approval to be mailed to the membership. The letter was not approved. A standard announcement card was suggested instead.

**Bridge Medical Associates:** After discussion it was decided that more facts regarding staff make-up and membership should be obtained prior to the Board's endorsement or disapproval.

**Meeting with Dr. Paul Sanazaro:** The meeting scheduled with Dr. Sanazaro for June 23rd was cancelled. Subsequently, Dr. Korengold and Dr. Boland met with a representative to set up studies of a comparison between care received by patients of Group Health and fee for service individual physician care. One of the primary aims of this study will be to determine similarities and differences between the two systems of care.

**1971 Annual Business Meeting:** This year the Annual Business Meeting will be held on November 15th, and it will be a dinner meeting. The election of officers will be held at this time, and an increase of dues will be discussed.

**St. Paul Insurance Company:** The St. Paul Insurance Company will write insurance policies for physicians only if they are members of their local medical society.

**New Member Reception:** A reception for the new members of the Society is scheduled for July 29 at 6:30 p.m. All Board members were urged to attend.

**The Washington Magazine:** A letter of rebuttle was sent to the Editor of the Washingtonian in response to the recent article published on Washington physicians and on the Medical Society.

**Methadone Guidelines:** The methadone treatment guidelines as set forth by the Medical Society have recently been accepted by Medicaid.

**Nominating Committee:** The slate of candidates for the Nominating Committee were approved by the Board.

**House and Building Committee:** After Mr. Ferraraccio elaborated on the various recommendations set forth by this committee, a motion was made and carried to approve the House and Building Fund Committee and the expenditure of the funds involved. Mr. Ferraraccio was commended for his efforts in support of the recommendations.

**Public Information and Education Committee:** The Sub-committee on Community Health Week of the Public Information and Education Committee has set forth the following goals: (1) To bring attention to important advances in medicine and health care; (2) To stimulate public awareness of growth, quality, and availability of health resources and facilities; and (3) To increase awareness of the local health problems and needs.

The Committee recommended the following proposals in order to achieve these goals: (1) Health Screening which would be carried out at 8 centers in the District of Columbia. These centers would have staff personnel as well as physicians recruited from the Medical Society. The only cost incurred would be that of promotional material; (2) A career development booklet entitled "Horizons Unlimited" published by the A.M.A. with a page inserted which identifies career training centers in the Washington, D. C. area; (3) The development of a scientific exhibit depicting the various activities in which physicians establish dialogues with their communities; (4) The development of a health services bronchure which would serve as a guide for those seeking information concerning medical testing, care and advice in the Washington, D. C. area; (5) The utilization of speakers and also public radio and television to disseminate public health information.

The Board approved recommendations 1, 2, 4 and 5 and recommendation 3 was rejected because of cost.

**Foundation Sub-committee:** Dr. Boland reported that the Foundation Subcommittee met with representatives from Hennipin County. The Subcommittee recommended that the Medical Society begin steps to establish a "Foundation for Health Care" for the Washington area. The Sub-committee requested a sum of $500 to proceed with legal counsel to incorporate such a foundation. It was pointed out that the state of Georgia has incorporated a foundation. California has also formed such groups. Funds were also requested, to meet with representatives from Georgia and California. After further discussion, and a suggestion that the constitution be similar to an "open-end mortgage", a motion was made and carried that the Foundation Subcommittee be authorized to expend up to $1000 for articles of incorporation in the formation of a foundation and other items connected with incorporation.

**Annals Subcommittee:** After lengthy and detailed discussion of the Subcommittee's recommendations, it was the decision of the Board to authorize the Chairman to place the publication of the ANNALS in the hands of the Associate Editor with the exception of the scientific papers, which will continue to be reviewed by the Editor, Dr. Wallace M. Yater.

**Section on Endocrinology Recommendation:** The Board approved the recommendation of this Section that its name be changed from "Section on Endocrinology" to "Section on Endocrinology and Diabetes."

There being no further business, the meeting was adjourned at 11:00 p.m.

# NEW MEMBERS

### Active

NAYAB, ALI, M.D. Office: D. C. General Hospital. Born in Bareilly, India. Medical degree: King Edward Medical College, 1961. Specialty: Internal Medicine–Cardiology.

BLACKWELL BRUNER, M.D. Office: 1605 22nd Street, N.W. Born in Washington, D. C. Medical degree: George Washington University, 1963. Specialty: Ophthalmology.

NORMAN JAY COWEN, M.D. Office: 1712 Eye Street. Born in Providence, Rhode Island. Medical degree: University of Pennsylvania, 1960. Specialty: Hand Surgery.

ADOLPHO DEPERIO, M.D. Office: Washington Hospital Center. Born in the Philippines. Medical degree: Far Eastern University, 1961. Specialty: Anesthesiology.

ROBERT ROSS HUNTLEY, M.D. Office: Georgetown University School of Medicine. Born in Wadesboro, North Carolina. Medical degree: Bowman-Gray Medical School, 1951. Specialty: Biostatistics, Epidemiology & Health Administration.

DAVID CLIFFORD MCCULLOUGH, M.D. Office: Georgetown University Medical Center. Born in Findlay, Ohio. Medical degree: Ohio State, 1961. Specialty: Neurosurgery.

HAROLD S. MIRSKY, M.D. Office: 2400 H Street. Born in New York City. Medical degree: State University of New York–Upstate, 1964. Specialty: Internal Medicine–Hematology and Oncology.

WOO YOUNG PARK, M.D. Office: Georgetown Hospital. Born in Korea. Medical degree: Yonsei University, 1960. Specialty: Anesthesiology.

KIRPAL S. SIDHU, M.D. Office: Freedmen's Hospital. Born in Mehraj, India. Medical degree: Glancy Medical College (India), 1964. Specialty: Orthopedic Surgery.

### Associate

CHESTER A. DILALLO, M.D. Office: 4400 Stamp Road, Marlow Heights. Born in Schenectady, New York. Medical degree: Albany Medical School, 1962. Specialty: Orthopedic Surgery.

TAIK KYONG KIM, M.D. Office: 702 15th Street, Health Center. Born in Seoul, Korea. Medical degree: Seoul National University, Korea, 1960. Specialty: Pediatrics.

LOUIS SPEKTER, M.D. Office: 5600 Fishers Lane, Rockville, Maryland. Born in Russia. Medical degree: University of Rochester, 1933. Specialty: Pediatrics, Administrative.

### Resident-Intern

NOEL CARR, M.D. Office: Howard University Hospital. Born in Trinidad. Medical degree: Howard University, 1968. Specialty: Obstetrics & Gynecology.

WILLIAM MCAVENEY, M.D. Office: Children's Hospital. Born in New York. Medical degree: State University of New York–Downstate, 1967. Specialty: Residency in Pediatrics.

### Student

GEORGETOWN UNIVERSITY. *Sophomores*: Marc Blum, Kenneth Butler, James J. Edwards, Harvey Kagan, Steven F. Mazer, Joseph McCaffrey, William Patrick, Donald Shifrin, John Edward Sutton. *Juniors*: Marylin Bacon, John R. DeBaise, Jed D. Gould, Robert G. Notz, Michael M. Orlando.

GEORGE WASHINGTON UNIVERSITY. *Sophomores*: George F. Cresswell, Gary Henrikson, Philip Noguchi, Asher Don Rabinowitz. *Juniors*: Pamela Kaires, Kerry Lee Kutln. *Seniors*: Paul Kravitz, Edison Miyawaki, Harold C. Pillsbury, Richard Reff, Shalom Seltzer.

HOWARD UNIVERSITY. *Sophomores*: Linda Jo Whitby. *Seniors*: Eugene Sussman, Frank F. Thompson.

# OFFICIAL PROGRAM

## *1971 Scientific Assembly*

## *The Medical Society of the District of Columbia*

## STATLER HILTON HOTEL

All Scientific Sessions in the Presidential Ballroom

**John J. Lynch, M.D.**, *Presiding*

General Chairman, 1971 Scientific Assembly

### SCIENTIFIC PROGRAM

### THURSDAY MORNING, SEPTEMBER 23, 1971

9:05 **WELCOME**
**Marvin C. Korengold, M.D.**
President, Medical Society of the District of Columbia

9:10 **NATIONAL HEALTH INSURANCE**
Moderator:
**Mr. Ben Gilbert**
WETA-TV, Assistant to the President
Guest Speaker:
**George Meany**
President, AFL-CIO

10:45 **COFFEE BREAK**

11:00 **THE EFFECTS OF TRAUMA AND ACUTE DISEASE ON ACID BASE HOMEOSTASIS**
Guest Speaker:
**Francis D. Moore, M.D.**
Moseley Professor of Surgery, Harvard Medical School, Surgeon-in-Chief, Peter Bent Brigham Hospital

### THURSDAY AFTERNOON, SEPTEMBER 23, 1971

2:00 **MEDICAL MALPRACTICE PROBLEMS**
Moderator:
**Harvey Ammerman, M.D.**
Clinical Professor of Neurosurgery, George Washington University School of Medicine; Chairman, Medicolegal Committee, Medical Society of the District of Columbia
Guest Speaker:
**Charles A. (Carl) Hoffman, M.D.**
President-Elect, American Medical Association, Past-President, American Urological Association, Past-President, American Association of Clinical Urology

3:15 **COFFEE BREAK**

3:30 **PHYSICIAN RELICENSING AND AUDIT**
Moderator:
**George E. Miller, M.D.**
Director of Research in Medical Education, University of Illinois College of Medicine
Guest Speakers:
**Warren L. Bostick, M.D.**
Dean, University of California College of Medicine, Member, American Medical Association, Council on Medical Education
**Merle Pennington, M.D.**
Chairman, Council on Medical Education, Oregon Medical Association

5:00 **ADJOURNMENT**

## FRIDAY MORNING, SEPTEMBER 24, 1971

9:00 FEDERAL PLANS FOR HEALTH CARE
Guest Speaker:
**John S. Zapp**

9:30 COFFEE BREAK

10:00 CLINICAL PATHOLOGICAL CONFERENCE—"The Jaundiced Patient"
Guest Speakers:
*Gastroenterologist:*
**Charles S. Davidson, M.D.**
Associate Professor of Medicine, Boston City Hospital
*Gastrointestinal Surgeon:*
**Charles G. Child, III, M.D.**
Professor & Chairman, Department of Surgery, University of Michigan Medical School
*Radiologist:*
**Robert E. Wise, M.D.**
Chairman, Department of Diagnostic Radiology, Lahey Clinic Foundation; Chairman, Department, of Radiology, New England Baptist Hospital; Clinical Professor of Radiology, Boston University, School of Medicine
*Pathologist:*
**Kamal G. Ishak, M.D., Ph.D.**
Chief, Hepatic & Pediatric Branch, Armed Forced Institute of Pathology, Washington, D.C.

## FRIDAY AFTERNOON, SEPTEMBER 24, 1971

2:00 THE FUTURE ROLE OF THE PRIVATE PHYSICIANS AND HOSPITALS IN A CHANGING HEALTH WORLD
Moderator:
**George Silver, M.D.**
Professor of Public Health, Yale University Medical School
Guest Speaker
**LeRoy E. Bates, M.D.**
Vice President for Medical Affairs, Health Insurance Plan of Greater New York

3:15 COFFEE BREAK

3:30 THE PROBLEMS OF DIAGNOSIS AND THERAPY
Guest Speaker:
**Alvan R. Feinstein, M.D.**
Professor of Medicine & Epidemiology, Yale University School of Medicine; Chief, Eastern Research Support Center, West Haven Veterans Administration Hospital

4:15 ADJOURNMENT

# SCIENTIFIC EXHIBITS

Exhibit Hall Will Be Open Thursday, 9:00 a.m. to 5:00 p.m.
Friday, 9:00 a.m. to 4:00 p.m.

ACUTE APPENDICITIS IN THE GERIATRIC PATIENT
Allan Hall, M.D., Thomas M. Wright, M.D.

ANORECTAL DISEASES, BENIGN AND MALIGNANT
Jacob J. Weinstein, M.D., Moreye Nusbaum, M.D., Aniceto Gauzon, M.D., Department of General Surgery, Washington, D.C.

ARTHROGRAPHY OF THE KNEE JOINT
Stanford A. Levine, M.D., Albert J. Miele, M.D.

CANNABIS
James E. Wilson, Capt. MC USN, Bureau of Medicine and Surgery, Navy Department

CLINICAL EXPERIENCES WITH THE MODIFIED ARTERIAL GRAFT (BOVINE ORIGIN) IN MAN
John M. Keshishian, M.D., Nicholas P.D. Smyth, M.D., Frank A. Camp, M.D., Paul C. Adkins, M.D., William Z. Yahr, M.D.

CRYOPROTECTION
Evan Stone, M.D.

FOOD ADDICTION AND ECOLOGIC MENTAL ILLNESS
Eloise W. Kailin, M.D., Theron G. Randolph, M.D., Leonard Rosenzweig, M.D.

**FUNCTIONAL LENGTHENING OF THE AMPUTATED DIGIT**
Norman J. Cowen, M.D., Sheila Cowen, A.B., A.M.

**HUMAN BREAST CANCER VIRUS STUDIES**
William F. Feller, M.D.

**ILEOSTOMY IN ULCERATIVE COLITIS—A STUDY OF 1,803 CASES**
David A. Morowitz, M.D.

**INFRARED THERMOGRAPHY IN MEDICAL DIAGNOSIS**
Margaret Abernathy, M.D.

**MIDDLE EAR EFFUSIONS: THE MOST COMMON CAUSE OF DEAFNESS IN CHILDREN**
Blair M. Webb, M.D., James J. McFarland, M.D., Robert E. Pumphrey, M.D.

**OSTEOTOMY IN BILATERAL EXTENSIVE MYOSITIS OSSIFICANS OF BOTH HIPS IN PARAPLEGICS**
Tumkur Madhu, M.D., Chief, Physical Medicine & Rehabilitation, Barrett Goldstein, M.D., Orthopedic Consultant, Moe Weiss, M.D., Medical Director, James W. Wills, M.D., Chief, Treatment Division, Glen Dale Hospital

**PACEMAKER COMPLICATIONS**
William S. Lyons, M.D., Joseph W. Peabody, M.D., V.C. deGuzman, M.D., Michael Seremetis, M.D.

**REHABILITATION OF THE CANCER PATIENT**
American Cancer Society, D.C. Division, Inc.

**RETOMAMMARY APPROACH TO BREAST TUMOR EXCISION**
W.W. Funderburk, M.D., Associate Professor of Surgery, Howard University College of Medicine

# TECHNICAL EXHIBITS

Exhibit Hall Will Be Open Thursday, 9:00 a.m. to 5:00 p.m.
Friday, 9:00 a.m. to 4:00 p.m.

The following Companies will be represented in the Technical Area. They have items of interest to display and to discuss with you. A visit to each booth is suggested.

**ASTRA PHARMACEUTICAL PRODUCTS**
Worcester, Massachusetts

**AUTOMATED MANAGEMENT SYSTEMS**
Washington, D.C.

**AYERST LABORATORIES**
New York, New York

**BETH—MONT SURGICAL SUPPLY CO.**
Bethesda, Maryland

**BEUCHLERS**
Washington, D.C.

**BIALEKS MEDICAN ARTS PHARMACY**
Washington, D.C.

**BIO-DYNAMICS, INC.**
Indianapolis, Indiana

**BIONETICS RESEARCH LABORATORIES, INC.**
Bethesda, Maryland

**BURROUGHS WELLCOME COMPANY**
Research Triangle Park, North Carolina

**COCA-COLA USA**
Atlanta, Georgia

**THE EMKO COMPANY**
St. Louis, Missouri

**ENCYCLOPAEDIA BRITANNICA, INC.**
Chicago, Illinois

**HEALTH AUTO DATA**
Washington, D.C.

**HOECHST PHARMACEUTICAL COMPANY**
Somerville, New Jersey

**KLOMAN SURGICAL SUPPLY**
Washington, D.C.

**LOMA LINDA FOODS**
Riverside, California

**MEDICAL SERVICE OF D.C.**
Washington, D.C.

**MELWOOD FARM, INC.**
Olney, Maryland

MERCK SHARP & DOHME
West Point, Pennsylvania

THE NATIONAL BANK OF WASHINGTON
Washington, D.C.

PFIZER LABORATORIES
Chamblee, Georgia

SANDOZ PHARMACEUTICALS
Hanover, New Jersey

W. B. SAUNDERS COMPANY
Philadelphia, Pennsylvania

SCHOLASTIC SYSTEMS, INC.
Hackensack, New Jersey

G. D. SEARLE
Chicago, Illinois

E. R. SQUIBB, INC.
New York, New York

SUTER ASSOCIATES RETIREMENT PLANNING, INC.
Arlington, Virginia

UNITED MEDICAL LABORATORIES, INC.
Portland, Oregon

# SPECIAL EVENTS

(All Functions at the Statler Hilton Hotel)

## THURSDAY, SEPTEMBER 23, 1971

7:45 a.m. **PRAYER BREAKFAST** .......... New York Room

12:00 Noon **ANNUAL SOCIETY LUNCHEON** .......... Presidential Ballroom
Greetings by **Dr. Wesley W. Hall**, President, American Medical Association
Presentation of Society Awards
Free Tickets available at Advance Registration or Assembly Registration Desk ($10.00 non-members)

12:00 Noon **WOMAN'S AUXILIARY LUNCHEON** .......... Galleries
Guest Speaker: **Charles A. Hufnagel**, M.D., Chairman, Department of Surgery, Georgetown University Medical Center
Tickets available at the Medical Society Building or Assembly Registration Desk ($7.00)

6:30 p.m. **PHYSICIANS' AND OFFICE STAFF RECEPTION** .......... Presidential Ballroom

7:30 p.m. **PHYSICIANS' AND OFFICE STAFF DINNER** .......... Presidential Ballroom
Tickets available at Advance Registration or Assembly Registration Desk ($10.00)

## FRIDAY, SEPTEMBER 24, 1971

12:00 Noon **MEDICAL ALUMNI LUNCHEONS**
George Washington University .......... Presidential Ballroom
Georgetown University .......... Galleries
Maryland University .......... Pan American Room
Tickets available at the Alumni Offices or the Assembly Registration Desk

7:30 p.m. **ANNUAL SOCIETY RECEPTION** .......... Congressional Room
(Courtesy of Russell, Marsh & Kennedy, Inc.)

8:30 p.m. **ANNUAL SOCIETY DINNER/DANCE** .......... Presidential Ballroom
Tickets available at Advance Registration or Assembly Registration Desk ($15.00)

## SPECIAL CREDITS

The Medical Society gratefully acknowledges the generous contributions from the following:

**A. H. Robins Company**
Richmond, Virginia

**Doctors' Automated**
Washington, D. C.

**Drug Fair, Inc.**
Alexandria, Virginia

**Eli Lilly and Company**
Indianapolis, Indiana

**Joseph E. Jones Agency**
Mutual of Omaha Insurance Company
Washington, D. C.

**Russell, Marsh & Kennedy, Inc.**
Washington, D. C.

**Union Trust Company**
**of the District of Columbia**
Washington, D. C.

**Wilkins Coffee Company**
Landover, Maryland

### Woman's Auxiliary Notes

The Woman's Auxiliary to the Medical Society of D. C. will present its first Art Show at the Medical Society Building on Tuesday, November 9, 1971 at a reception from 6 to 9 p.m. The show will feature paintings, watercolors, sculpture, ceramics and needlework done by members of the Society and the Auxiliary. Awards will be presented by professional judges to the most popular, best in show and a special award to the sixteen year old or under category. All members are cordially invited to submit one or more of his works for the show. The exhibit will continue on Wednesday, November 10 from 10 a.m. until 2 p.m. and close on November 11 at Noon.

For further information and to enter, please call: Mrs. J. W. Pearson at 654-3060, Mrs. P. P. Steptoe at 654-7635 or Mrs. W. F. Abendschein at 966-9090.

## MEETINGS

The Joint Meeting of the Washington Society of Pathologists and the Maryland Society of Pathologists will be held on Saturday, October 2, 1971 at the Annapolis Hilton Inn, Annapolis, Md. from 9:00 a.m. to 5:00 p.m. A slide seminar on difficult problems in surgical pathology is planned for the morning, and an afternoon symposium on immunopathology. Cocktails and dinner are planned for the evening.

The American Academy of Pediatrics will hold its 40th annual meeting at the Palmer House Hotel, Chicago, Ill. from Oct. 16-21. The meeting will feature a versatile program of scientific presentations, seminars, round tables and symposiums including: Seven symposiums during the general sessions on teen-age pregnancy, behavior modification by drugs, divorce: its effects on children, immunizations-progress and problems, environmental hazards, mists, aerosols and oxygen, and exciting new developments in pediatrics; Approximately 133 papers on all facets of pediatrics to be presented during meetings of the Sections on Allergy, Anesthesiology, Cardiology, Child Development, Community Pediatrics, Diseases of the Chest, Military Pediatrics, Pediatric Pharmacology, and Surgery plus the Committee on Urology; Seventeen round tables covering such subjects as family therapy, seizures, allergy, failure to thrive, cardiology, visual diagnosis: neurology, and renal disease; Eighteen seminars covering such areas of pediatrics as cardiology for pediatricians, newborn and premature, allergy, antibiotics, immunology, neurology, psychiatry, pediatric orthopedics, endocrinology, dermatology, fluids and electrolytes and renal disorders; Several special sessions including a symposium on children's television programming, plus meetings of the American Association of Poison Control Centers, and the AAP Council on Pediatric Practice; twelve motion picture films—each dealing with a vital aspect of pediatrics—to be shown on a regularly scheduled basis during the annual meeting.

The Academy, with more than 12,500 members in the U.S., Canada, and Latin America, is the Pan-American association of physicians certified in the care of infants, children and adolescents.

## GENERAL NEWS

Concerned over the fact that **cigarette smoking** is steadily increasing among the youth, the **American Cancer Society**, Washington Metropolitan Area, has developed an anti-smoking flip chart teaching aid for use in the health studies programs of the area's 850 elementary schools.

John J. Lynch, M. D., Chairman of the American Cancer Society's Washington Metropolitan Lung Cancer Site Committee feels that the enthusiastic approval of the Boards of Education of the Washington Metropolitan Area strongly indicates that the American Cancer Society's advice that "The Best Tip Yet Is Not To Start" may have more impact when taught at the elementary school level. Dr. Lynch said, "the best way of dissuading children from smoking is to show them the ill effects during their early school years."

Dr. Lynch further stated that by September, 1971, each of the area's elementary (public, private, and parochial) schools will have been presented one flip chart series for use in classroom presentations. He added, "Pretesting of this teaching aid has already shown a great deal of interest among the youngsters in alerting them to the dangers associated with cigarette smoking."

**Project HOPE** has just completed a summer health **career training program for Navajo and other Indian students** in the heart of the 16-million acre Navajo Indian reservation. A motivating force behind the HOPE program is Dr. Taylor McKenzie, the only Navajo physician in the world. He coordinated the effort under HOPE auspices and helped recruit interested Indian students from colleges and high schools to come to HOPE's health career training center for a twelve-week summer experience in the fields of their chosen medical professions.

The program revolved primarily around four premedical students and one nursing student from Calvin College, Fort Lewis College, Dartmouth College, and the University of Arizona. Eight Indian high school students from neighboring communities also participated in the summer experience.

Although most of the learning experience was conducted at Project HOPE's Sage Memorial Hospital at Ganado and in HOPE satellite clinics on the reservation, Dr. McKenzie provided ten days of individual counseling and guidance for the students. Dr. McKenzie is the Service Unit Director at the United States Public Health Service Hospital at Shiprock, Arizona.

**Robert Lee Hudson M.D.** joined the staff of the Center for Sickle Cell Anemia at the **Howard University College of Medicine** on August 2. Dr. Hudson, serving as Coordinator in the Center, is a graduate of the Howard University College of Medicine. He was formerly Chief Resident in Pediatrics at Freedmen's Hospital. Later he pursued postgraduate study in Pediatric Cardiology at Children's Hospital.

The Center for Sickle Cell Anemia at Howard University is concerned with extension of research in this disease, improvement in professional services to patients, screening of population groups and genetic counseling as well as educational activities for professionals and the public.

The Center came into reality by virtue of donations from organizations and citizens, particularly from Hartford, Connecticut and environs through the efforts of Mr. Leonard J. Patricelli, President of Broadcast-Plaza, WTIC TV station.

Dr. Roland B. Scott is Director of the Center. Associate directors are Dr. V. Bhushan Bhardwaj and Dr. William H. Bullock, members of the faculty of the Howard University College of Medicine.

**Freedmen's Hospital** has just completed a newly constructed **play yard for convalescent children.** The project received a big boost on August 8, 1971, when Mrs. Emmette H. Carpenter, President of the Women's Auxiliary to the Medico-Chirurgical Society of D.C., Inc. visited the Hospital and presented a check of $1,000 for the purchase of needed equipment for the play yard.

This gift will make it possible for the Hospital to extend its service to convalescent children who are confined to the Pediatric Service for treatment.

**The American Board of Family Practice** announces that it will give its next examination for certification in various centers throughout the United States. The examination will be over a two-day period on April 29–30, 1972. Information regarding the examination can be obtained by writing: Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506.

Citing the development of the new Metropolitan Hospital here, the **Washington Heart Association today paid high tribute to the Officers and Directors of the Washington Medical Center** for their vision and dedication. The Local Association presented a **Special Award of Merit** to the Medical Center for having erected the largest Extended Care Facility in the United States. The nine-story, 532-bed Metropolitan Hospital, which opened in January 1971, is located at 1143 New Hampshire Ave., N.W. It is designed to provide full-graded care for patients in this area at a much lower cost than in acute care hospitals. Included are limited acute care, extended care, nursing services, resident services, and rehabilitation services. Specialty services available at the new hospital are in the fields of Allergy, Arthritis, Cancer Chemotherapy, Cardiovascular-Periphial Vascular, Dermatology, Endocrine-Metabolic, Geriatric, Psychiatric, Pulmonary and Stroke.

The presentation took place at the Annual Public Elections meeting of the Heart Association held in the Exhibit Hall of the Medical Society of D.C. Building.

A Georgetown University medical team mixed block parties and church-going in an **all-out attack against hypertension** in Washington's inner city.

"The way to hit a disease hard is to reach the people and keep them coming back," says **Dr. Frank A. Finnerty**, director of the campaign and head of Georgetown's cardiovascular group at D.C. General Hospital.

Inner city residents were notified mainly through flyers, that a medical team would examine people for hypertension at block parties and at church. A "blood pressure block party" will be given three times a week in one neighborhood after another with the cooperation of the local civic association. There will be ice cream, hot dogs, and fun, says Dr. Finnerty.

"The blood pressure test we give is free and it doesn't hurt," he adds.

The first party was given Saturday, July 17, at Bryant School Park, Kentucky and South Carolina Avenues, S.E., from 1 to 5 p.m. Cooperating in this project will be the Southeast Civic Association, headed by President Sara Montgomery.

The medical team will go to a different church every Sunday until it covers each church in the area.

When the screening team, made up of Georgetown medical students, validates hypertension in someone, the person will be invited to receive treatment at D.C. General. Dr. Finnerty's group there will offer intensive followup care on an individual basis. One doctor will be assigned to a particular patient. There will be no long waits for visits.

Over a four-to-five-year period, Dr. Finnerty expects to treat 6–8,000 people. The project is part of a national program funded by the National Institutes of Health to develop and evaluate different methods of detecting and treating hypertension. Mild and severe cases of hypertension will be treated, and data will be collected to study effects of the program which will hopefully lower disease and mortality rates.

The **Washington Heart Association** has announced **special clinical fellowships** in cardiovascular diseases.

The Fellowships are intended to strengthen teaching, research and clinical training in cardiovascular disease by encouraging outstanding young clinicians to seek specialized training.

For further information write the Program Director, Washington Heart Association at the Medical Society Building at 2007 Eye Street, N.W., Washington, D. C. 20006. Telephone: 296-4697.

**Tsung O. Cheng, M.D.**, Associate Professor of Medicine at the George Washington University School of Medicine, and Chief of Cardiology, The George Washington University Medical Division, D.C. General Hospital, was appointed Chief of Cardiology at the District of Columbia General Hospital, effective July 1, 1971.

**The Navy Medical Service Corps** celebrated its 24th anniversary on August 4.

Founded by the Army-Navy Medical Service Corps Act of 4 August 1947, and currently headed by Captain Emmet L. Van Landingham, Jr. who assumed his duties in 1968, the Medical Service Corps is composed of six sections Health Care Administration Section, Medical Allied Science, Pharmacy, Optometry, Podiatry, and Medical Specialist.

In the 24 years since it was established the Corps has become an important part of the Navy's health care system. Its members represent a wide variety of academic disciplines, ranging from research and the allied sciences to hospital administration and management. Forty two percent of the Ph.Ds in the Navy are held by Medical Service Corps officers.

Medical Service Corps officers serve aboard ships, at hospitals and dispensaries, with the Marines, and on the staffs of the major fleet and district commanders and have earned a well deserved reputation for effective management and support of the many programs designed to meet the increasing complexities of naval medicine.

**A summer-long study of the delivery of health** care in **Maryland's principal beach resort, Ocean City**, is now underway. This study, under the joint auspices of the Maryland Comprehensive Health Planning Agency and The Health Planning Council of the Lower Eastern Shore, Inc., was initiated at the request of the Ocean City Medical Commission.

The Ocean City area presents a special challenge in providing effective and economical health care. The winter population numbers about 1,600, while frequently the summer population on weekends exceeds 100,000. Included in the study is the projected winter population growth spurred by nearby Ocean Pines, and the visitors to Assateague State Park and National Seashore.

Data to be gathered during the study will include: determinations of the nature and extent of current demand for health services by the resident and transient populations; 10-year projections of the demand for health services; determinations of the capacity of existing health services; the nature of the relationship among health resource centers such as physicians' offices, first aid stations, clinics, and the hospital; physical factors which influence the demand for and provision of services, such as growth patterns, land use, location of activity centers, transportation, crowding, and sanitation; determinations of the methods by which transients are referred to or find their way to health services; and determinations of the community's ability, including county, State, and private assistance, to provide health resources.

Data gathering for the study is expected to continue through mid-September. Upon completion of this phase, data analysis and report preparation will be undertaken, and a final report is expected to be available for presentation to the Ocean City Medical Commission by December 1.

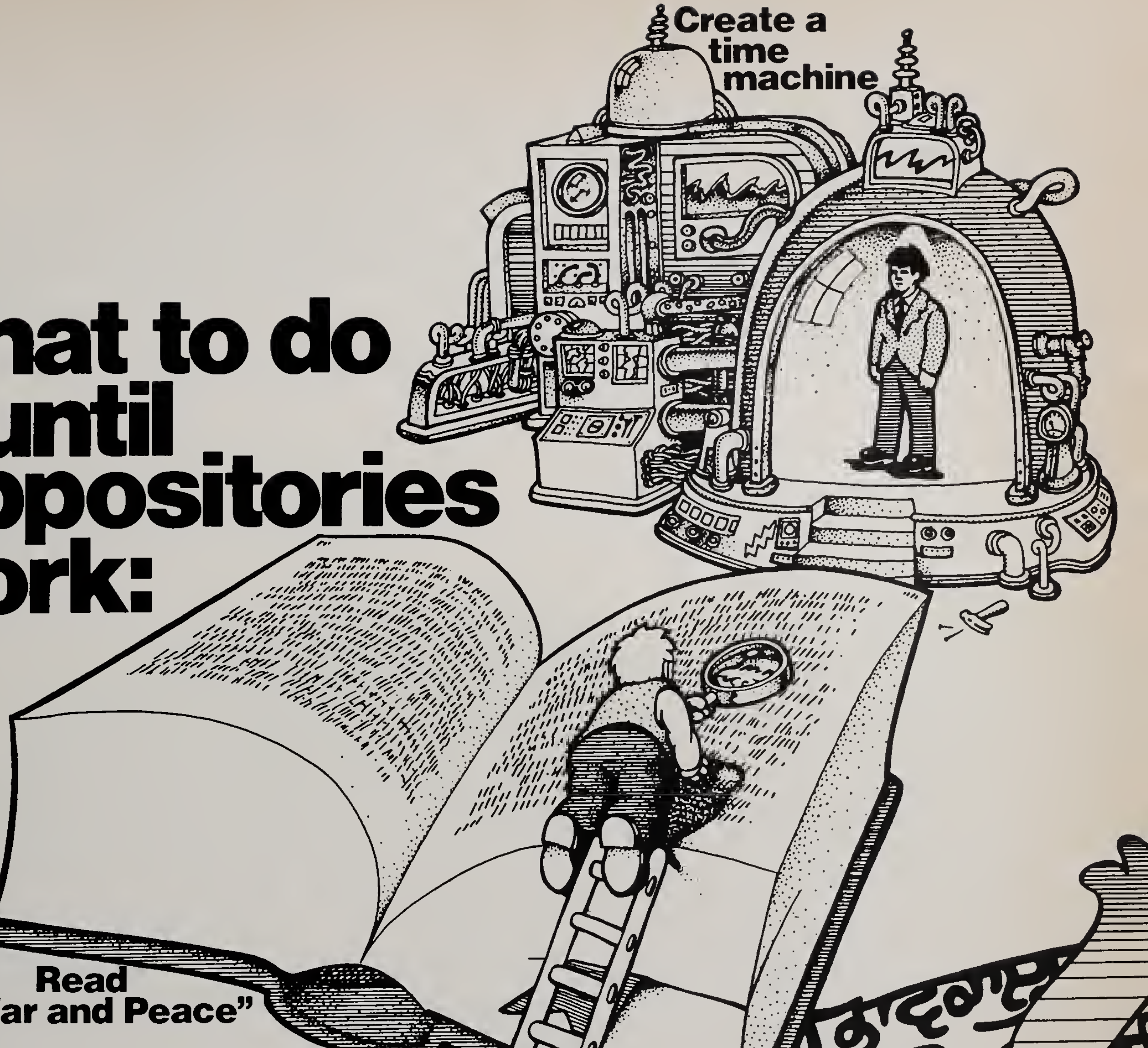
At the annual Catholic Hospital Association Meeting, **Ralph Nader** announced plans to establish a task force of "**public interest physicians**" in the nation's capital. "Before the end of the year, a small pilot group of these public-interested physicians will be established in the Washington area."

**An information storage and retrieval system**, the first and only one of its kind to be installed in a hospital environment and linked to a computer, is now operational at the Washington Medical Center. The Mosler 410 System was installed in late April, and is located in the New Medical Records Department of Doctors Hospital.

According to Maryland state health investigators and police, **forged prescriptions** are an ever-growing problem. Medicaid cards reportedly are being used in about 25% of the forgeries reports the state division of drug control. However, many are stolen from or lost by recipients.

An increase in measles has led to the first federal purchase of vaccine in five years. **Measles incidence** is the highest in five years, and is especially prevalent in slum areas. The government will distribute $4.8 million to state and communities to immunize approximately 8 million children.

# What to do until suppositories work:



Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

C. B. FLEET CO., INC.
Lynchburg, Va. 24505

**Warning:** Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present.
**Caution:** Do not administer to children under two years of age unless directed by a physician.
**References:** 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964

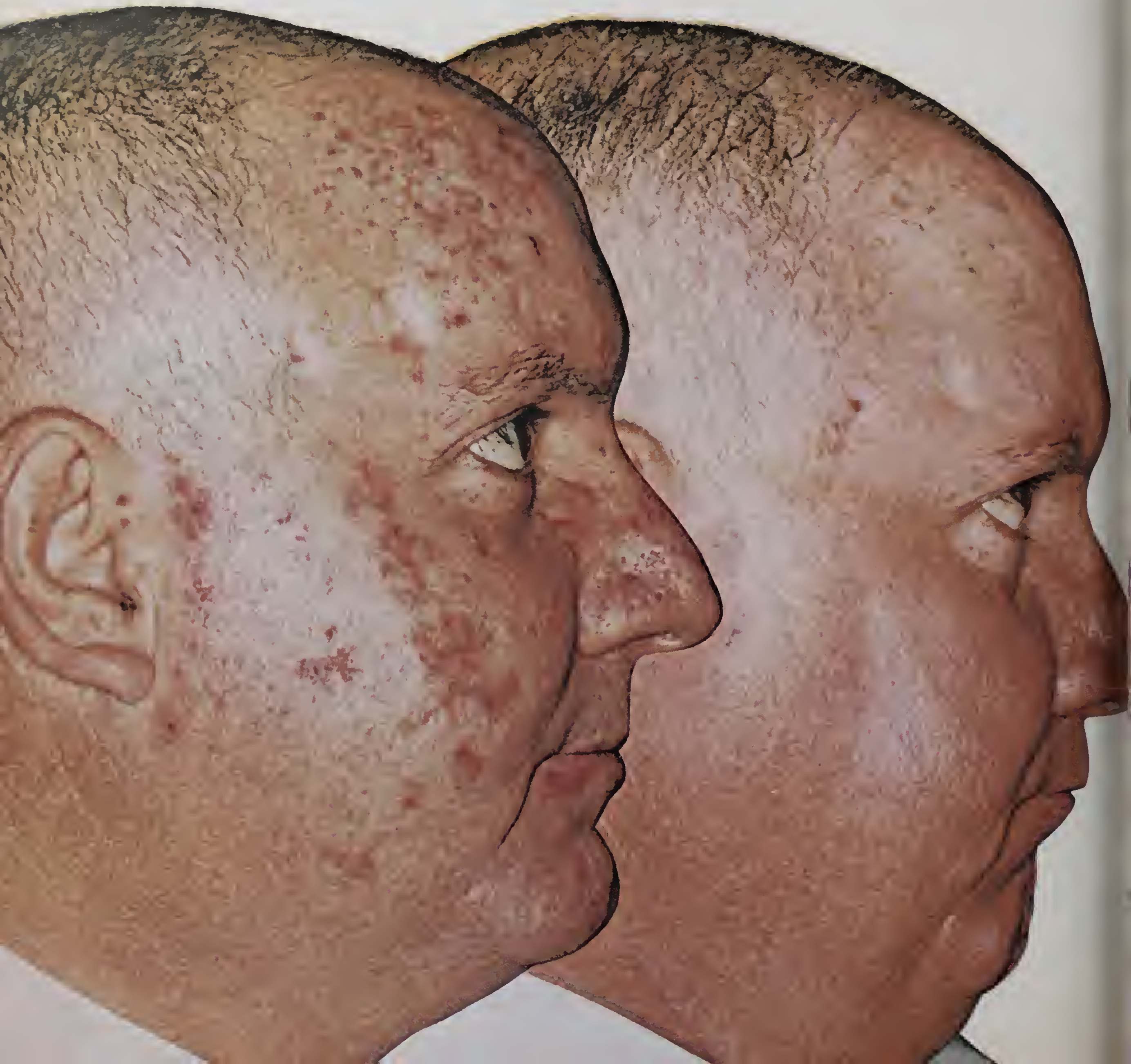
# Call it what you will, it may be premalignant..

**Before**

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

**After**

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

# nd Efudex® (fluorouracil) 5% cream can resolve it.

### l it actinic, solar or senile keratoses,
### ny regard it as "precancerous."[1,2]

cal fluorouracil, considered by some dermatologists to be a major
nce in the treatment of multiple solar keratoses,[3,4] offers the physi-
a relatively inexpensive alternative to cryosurgery, electrodesic-
on and cold knife surgery. Of the topical fluorouracils available, only
dex offers 2% and 5% solution and 5% cream formulations—formula-
s that have proved effective in the treatment of these mutliple lesions.

### ual duration of therapy, 2 to 4 weeks.

ies showed that with the 2% and 5% Efudex preparations, the usual
tion of therapy was only 2 to 4 weeks.[5] Other studies with topical
ouracil revealed that when concentrations of less than 2% were
, significant numbers of lesions recurred.[6]

### eats the lesions you can't see, too.

nerous lesions, not apparent prior to 2% and 5% Efudex therapy,
ifested themselves by definite reactions, while intervening skin
ained relatively unaffected.[5] The early eradication of these subclini-
esions (which may otherwise have undergone further progression)
ably accounts for the reduced incidence of future solar keratoses in
ents treated with topical fluorouracil—especially with 5%
entrations.[6]

### v to identify solar keratoses.

ically, the lesion—a flat or slightly elevated brown to red-brown
ule—is dry, rough, adherent and sharply defined. Multiple lesions
he rule.

### edictable therapeutic response.

response to a typical course of Efudex therapy is usually
acteristic and predictable. After 3 or 4 days of treatment, erythema
ns to appear in the area of keratoses. This is followed by a moderate
tense inflammatory response, scaling and occasionally moderate
erness or pain. The height of this response generally occurs two
s after the start of therapy and then begins to subside as treatment
opped. Within two weeks of discontinuing medication, the
mmation is usually gone. Lesions that do not respond should
opsied.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

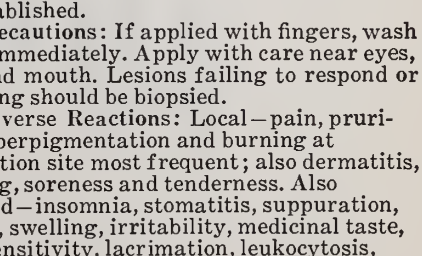
**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



now
**Efudex®**
**(fluorouracil)**
cream/solution

---

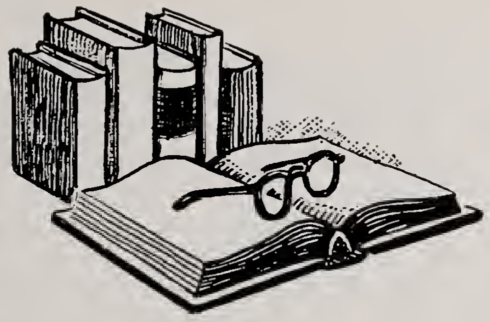
**ences: 1.** Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York,
e & Stratton, 1967, p. 842. **2.** Dillaha, C. J.; Jansen, G. T., and Honeycutt, W. M.:
tment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.):
*naceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968,
**3.** Belisario, J. C.: *Cutis*, *6*:293, 1970. **4.** Sams, W. M.: *Arch. Derm.*, *97*:14, 1968.
a on file, Hoffmann-La Roche Inc., Nutley, New Jersey. **6.** Williams, A. C., and
E.: *Cancer*, *25*:450, 1970.

If you don't do it, it won't get done.

GIVE THE UNITED WAY

advertising contributed for the public good

ADVERTISING COUNCIL



# Book Reviews

**The Face in Genetic Disorders**. RICHARD M. GOODMAN AND ROBERT J. GORLIN. Price, $19.00. Pp. 169, St. Louis: C.V. Mosby Company, 1970.

The authors provide a multi-disciplined background, of Medicine and Genetics and Oral Pathology and Genetics respectively, in preparing this handsome volume. They have gathered a large and fascinating collection of disorders of proven genetic origin as they present in the face, although where relevant many of the plates include the whole body or portions of it. The illustrations include numerous very rare disorders among the 75 presented, and, even better, are not a collection of well known previously published photographs. The plates are excellent photographically, in format, and as teaching demonstrations, with only one set of mislabelings caught by this reviewer (Figure 72), and with an innovative and succinct outline text facing each plate. The text includes a carefully edited list of references with each page, dating from just prepublication in 1969 to 1954 (Bartholin on Hypertrichosis universalis congenita, although the historical note dates his description as 1656. The reviewer did not check the original reference.) While the plates and their accompanying text form the bulk of the work, the introduction is very well written and offers an excellent broad review of family history, with a table of genetic disorders in ethnic groups; of modes of genetic transmission with comments on risk (with another fine table cataloguing X-borne mutations in man); and of genetic counseling. This last major section of the introduction assumes knowledge which the beginning student of these disorders may well not possess, such as the mechanisms of chromosomal aberration, although the two earlier sections had preceeded on the basis that many interested readers at least need a general review. At any rate, while it is hoped that most genetic counseling will be referred to those with experience, the principles are very well presented as generalities.

On first going through the plates one is struck with the need of some sort of key to identification (familiar to any amateur naturalist). While the book has great value as a teaching collection for use by the advanced student of these anomalies, its greater value is probably as an aid to those puzzled clinicians who need help in diagnosis of the more uncommon disorders—the majority of us. Those who need this assistance may well not know that the facial abnormality they see and cannot name is not proven to be on a genetic basis, and the book suffers from the exclusion of those disorders which are not genetic or at any rate, not yet proven to be. No key is possible without including them, and intelligent management cannot begin before identification. The preparation of a second section to include this group would add immeasurably to the already considerable value of this work; this last is obviously a very favorable criticism in that what the authors have given us is so good that we want more of it.

The book is a mandatory addition to the shelf of any physician interested in knowledge of rarer disorders—and some quite common ones—and is an absolute must for the eponym collector. It is more than that, however, in that the authors have succeeded in their intent of creating greater awareness of the new genetic syndromes, in improving diagnostic acumen, and in helping to stimulate the interest in this group of defects which will lead to research and perhaps ultimately to their elimination.

ROBERT B. W. SMITH, M.D., F.A.C.P.

**Essentials of Clinical Endocrinology**. NORMAN G. SCHNEEBERG, M.D. Price, $22.50. Pp. 449, with 210 illustrations. St Louis: C. V. Mosby Company, 1970.

The volume by Schneeberg is the latest in a long line of relatively small monographs covering the broad field of endocrinology. In general, I find that Schneeberg and his collaborators, some from the School of Medicine of the Hahnemann Medical College and Hospital, Philadelphia and others from the Albert Einstein Medical in Philadelphia have done an excellent job in this volume. I am particularly pleased with the illustrations, particularly some of the schematic diagrams scattered throughout the volume. In general, while each section is short what is packed into each of the paragraphs or several paragraphs relating to basic topics in endocrinology, it is well done, up to date and clearly explanatory.

There are only a few points that I would disagree with and I suspect that these are more related to problems in the proof reading than anything else. A classic example would be that on page 142 concerning the $T_3$ suppression test where a correct interpretation of this procedure, i.e. inadequate suppression of radioiodine uptake or of plasma levels of thyroid hormone if triiodothyronine is used as the suppressant is indicated on page 108 in a discussion of suppression tests, whereon page 142 it is indicated that suppression of significant magnitude is the rule in patients with hyperthyroidism. This is obviously incorrect, and I am sure it is a matter of the proof reading.

Also in the section concerning parathyroid disease in the discussion of the phosphate excretion index, no major problems develop until in the discussion on page 296 the final equation expressed in the last paragraph in the first column on page 296 seems to me to be incorrect mathematically although the concept is expressed properly.

Again on page 325 in the discussion of hepatogenous diabetes, it is indicated that a significant incidence of "fasting hyperglycemia" is found. Certainly the experience that I have had and that others have had in the classical description of the hepatogenous diabetic situation is that fasting hypoglycemia is the rule with a diabetic-like glucose tolerance curve in which the hyperglycemia levels persist for some hours before falling. This again, I think, represents a typographical or proof reading problem rather than anything else.

While one can always make the point that a volume is at least a year and a half to two behind upon coming into print and the same problems, of course, are found here; the abbreviations are a worthwhile addition to the volume and I believe the index is a good and functional one.

In general, I have no qualms about recommending this volume to the physician in the general practice of medicine or to the individual doing speciality work particularly as it relates to metabolic and endocrine diseases or to the student for purposes of brief review in terms of both the clinical manifestations of these processes and a reasonably adequate updating of the basic pathophysiology involved.

The recommended price of $22.50, I think, is a bit unreasonable considering the fact that there are only two color plates but for a fairly well packed 430 odd page volume, it is certainly not sufficient to make me recommend against purchase.

JOHN J. CANARY, M.D.
*Professor of Medicine*
*Georgetown University*
*School of Medicine*

**Synopsis of Pharmacology**, 2nd edition. V.C. SUTHERLAND, PH.D. Price, $10.75 (paper). Pp. 720, with illustrations. Philadelphia: Saunders, 1970.

Until recently pharmacology was taught during the first two years in most Medical Schools, before the student was exposed to the clinical applications of drugs. Much has been written over the years concerning the disadvantages of this method, which relegates pharmacology to the so-called "basic sciences". Those in many cases became a hurdle soon to be forgotten by the stethoscope carrying young medical student when he entered the wards.

The present text book, "A Synopsis of Pharmacology" is a further example of a book written for the pre-clinical student and does not relate in any systematic way to the clinical application of drugs. It is written in a relatively pedantic form. It is too long to serve as a quick review of pharmacology and too short to approximate anywhere a classic such as the admirable Goodman and Gilman. Another book with which the present one compares unfavorably is "Principles of Drug Action, the Basis of Pharmacology" by Goldstein et al.

Our new breed of medical students is more interested to gain an understanding of the principles of drug synthesis, structure function relationships, and the biological actions of certain chemical structures on receptor sites, than the learning by heart of a large number of pharmacological agents.

There are some omissions as well as mistakes in the present volume. On page 126 the blood pressure lowering effect of diuretics is not discussed adequately. On page 417, diazoxide is stated to have an anti-hypertensive action via a *diuretic* effect! It is of course well-known that diazoxide has an anti-diuretic effect.

FREDERICK WOLFF, M.D.
*Clinical Pharmacology Unit*
*Department of Medicine*
*George Washington University*
*at the Washington Hospital Center*

**Speech Pathology: An Applied Behavioral Science.** WILLIAM H. PERKINS, Ph.D. Price, $11.75. Pp. 449 with illustrations. St. Louis: C.V. Mosby Company, 1971.

Seldom does a reviewer have opportunity to use the words "beautiful, exciting, artistic" to describe a scientific text, but these are the words that come quickest to mind after reading Doctor William Perkins' prosaic treatment of speech pathology. Doctor Perkins has taken cognizance of the physical, biological, psychological, and sociological sciences to describe the discipline of speech pathology in a most generous, informative, and complete manner.

The text should be particularly useful as a basic springboard for the beginning speech pathologist since it incorporates a technique of forcing the student to make use of the bibliographical references by injecting thought questions into the textual material. Answers to these questions can only be found by reading the referenced authors.

The book is by no means specific to speech pathologists. It should prove particularly beneficial to the otolaryngology resident intent on having available in his library a handy reference as an over-view of speech disorders. Since each chapter begins with several pointed questions, the answers to which are supplied in the text and again in resume at the end of the chapter, the otolaryngology resident studying for Board examination will be especially thankful for Perkins' effort.

The text is divided into two major sections; the first dealing with the conceptual and philosophical data from which speech pathologists find application, and the second dealing with the more practical concerns of the clinical speech pathologist who must manage the therapeutic aspects of speech disorders. Together, or separately, the two sections form an outstanding contribution to the field of behavioral science–specifically to speech pathology.

DAVID M. RESNICK, PH.D.
*Director, Hearing and Speech*
*Washington Hospital Center*
*Washington, D.C.*

**Stereoscopic Manual of the Ocular Fundus in Local and Systemic Disease.** FREDERICK BLODI, M.D., LEE ALLEN, AND OGDEN FRAZIER. Price, $39.50. Pp. 135, with 119 illustrations; 112 stereoscopic views in full color on 16 VIEW MASTER* reels, and a VIEW MASTER* compact viewer. St. Louis: Mosby, 1970.

If one picture is worth a thousand words, then one stereoscopic view is worth ten thousand words. That is why the stereoscopic reels supplied with this manual make this book superior to the older fundus atlases. The book however, is not a textbook of fundus diseases, it is essentially a collection of selected stereoscopic fundus slides, with history and clinical findings given for each case. At times one gets a little impatient reading through irrelevant histories to get at the truly relevant facts, the arrangement of the history could have been better.

No book on the fundus today is complete without fluorescein views, and the fluorescein appearance of the various lesions are well demonstrated in the numerous black and white photographs, accompanied by clear and succinct explanations.

There is also a very good introductory chapter explaining how stereoscopic fundus photographs are obtained, as well as the basic features of fluorescein angiography.

This book for the ophthalmologist, should be kept within easy reach for half hourly perusual, and will then be found quite rewarding.

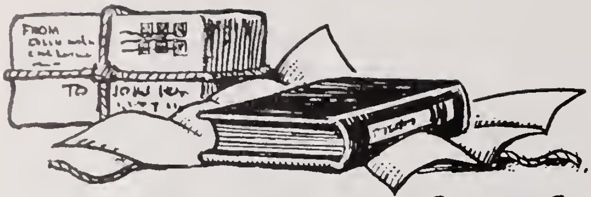
BERNARD EHRLICH, M.D.

---

* Trade mark

CAPITAL NURSE REGISTRY
(Est. 1910)
Licensed Practical Nurses and Practical Nurses Recommended by Physicians
All Nurses Have Had Hospital Training
One of Washington's outstanding Registries, serving physicians and surgeons since 1910
LICENSED BY DISTRICT OF COLUMBIA
*24 Hour Telephone Service*
RAndolph 3-2600 or 3-1771

Surgical Supplies and Equipment
*Complete Fitting Service for Ladies and Men*
KLOMAN SURGICAL SUPPLY CO.
1028 19th Street, N.W.
Washington, D. C. 20036
*Telephone:* 223-3444



# Books Received

Synopsis of Pediatrics, 3rd edition. JAMES G. HUGHES, M.D. Price, $14.50. Pp. 1141 with 88 illustrations. St. Louis: C.V. Mosby Company, 1971.

**The First Congress of The International Strabismological Association.** PETER FELLS, M.A., M.B., B.CHIR., F.R.C.S., D.O., editor. Price, $29.50. Pp. 312 with illustrations. St. Louis: C.V. Mosby Company, 1971.

**Medical Specialty Terminology, Volume 1–Pathology, Clinical Cytology, and Clinical Pathology.** CLARA GENE YOUNG AND JAMES D. BARGER, M.D., F.C.A.P. Price, $8.50. Pp. 251 with illustrations. St. Louis: C.V. Mosby Company, 1971.

**Ultrastructure of the Peripheral Nervous System and Sense Organs, Atlas of Normal and Pathologic Anatomy.** JEAN BABEL, ALBERT BISCHOFF AND HEINRICH SPOENDLIN. Price, $45.25. Pp. 452 with 203 illustrations. St. Louis: C.V. Mosby Company, 1971.

**The Family and Its Future.** A Ciba Foundation Symposium. KATHERINE ELLIOTT, editor. Price, $7.20. Pp. 230 with illustrations. London: Churchill, 1970.

**The Pineal Gland.** A Ciba Foundation Symposium. G. E. WOLSTENHOLME AND JULIE KNIGHT, editors. Pp. 401 with illustrations. Edinburgh: Churchill and Livingstone, 1971.

**Hormones and The Immune Response.** Ciba Foundation Study Group No. 36. G.E. WOLSTENHOLME AND JULIE KNIGHT, editors. Pp. 172 with illustrations. London: Churchill, 1970.

**Hypertrophic Obstructive Cardiomyopathy.** Ciba Foundation Study Group No. 37. G.E. WOLSTENHOLME AND MAEVE O'CONNER, editors. Pp. 220 with illustrations. London: Churchill, 1971.

**Manual of Tonography.** ROBERT C. DREWS, M.D. Price, $13.75. Pp. 128 with 89 illustrations. St. Louis: C.V. Mosby Company, 1971.

**Symposium on the Functional Physiopathology of the Fetus and Neonate.** Clinical Correlations. HAROLD ABRAMSON, M.D., editor. Price, $15.00. Pp. 182 with 61 illustrations. St. Louis: C.V. Mosby Company, 1971.

**Atlas of Ear Surgery.** WILLIAM H. SAUNDERS, M.D. AND MICHAEL M. PAPARELLA, M.D. Price, $32.00. Pp. 390 with 174 illustrations. St. Louis: C.V. Mosby Company, 1971.

**The Visual Fields, A Textbook and Atlas of Clinical Perimetry,** 3rd edition. DAVID O. HARRINGTON, A.B., M.D., F.A.C.P. Price, $21.50. Pp. 394 with 341 illustrations and 9 color plates. St. Louis: C.V. Mosby Company, 1971.

**Atlas of External Diseases of the Eye.** Volume III, Cornea and Sclera. DAVID O. DONALDSON, M.D. Price, $69.50. Pp. 475 with 254 figures, 112 stereoscopic views in full color on 16 View-Master® reels and a View-Master® compact viewer. St. Louis: C.V. Mosby Company, 1971.

DataMedics

**The result is total management control & increased cash flow**

DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

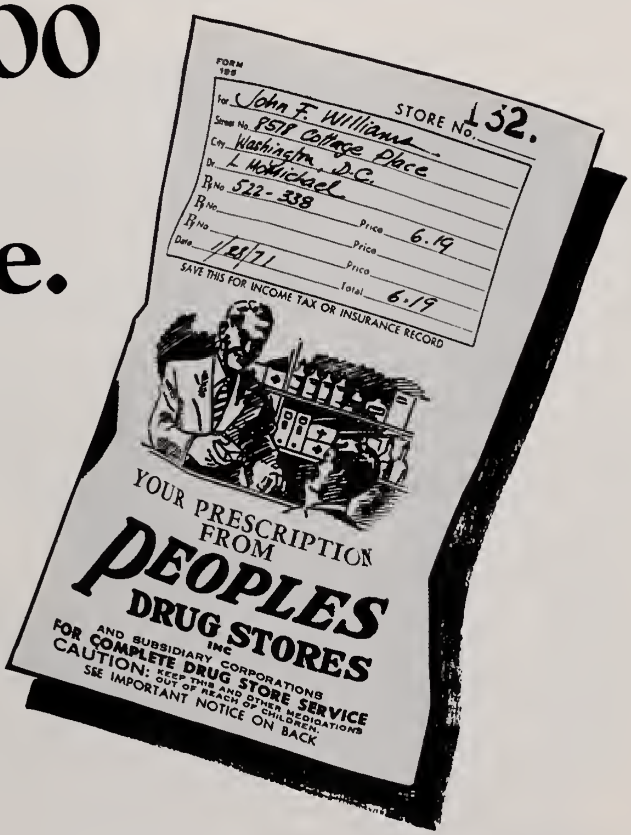
Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:
- Billing
- Bookkeeping
- Collecting delinquent accounts
- Designing offices
- Leasing equipment
- Preparing insurance claim data
- Preparing payroll tax data
- Recruiting personnel
- Training personnel

**How?**
Consultation by appointment.

DM

**DataMedics, Inc.**
**National Headquarters**
**7979 Old Georgetown Road**
**Washington, D.C. 20014**
**(301) 654-7666**
**Cable/Medic**
**Baltimore (301) 792-4424**

# The bag that has earned more than 125,000,000 votes of confidence.



FORM 155
For John F. Williams
STORE No. 132.
Street No. 8518 Cottage Place
City Washington, D.C.
Dr. L McMichael
℞ No 522-338
℞ No
℞ No
Price 6.19
Price
Price
Date 1/28/71
Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD

YOUR PRESCRIPTION FROM
PEOPLES DRUG STORES INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN.
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®
PRESCRIPTION DRUG STORES

**WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.**

**HEALTH AUTO-DATA, INC.**
4900 Massachusetts Avenue, N.W.
Washington, D.C. 20016
(202) 966–4300

*Serving the Physician*
*and the Community*

Health Auto-Data, Inc. (HAD), is organized to provide services to physicians to assist them in their daily routines.

Overhead cost may be reduced by having routine work done at the HAD facility.

We prepare a "patient profile" which may save a considerable amount of time. By having selected tests performed and a medical history taken prior to the physician's initial consultation with the patient, the physician finds it easier and less time-consuming to review the patient's history and analyze the test results.

The medical history is self-administered by patients utilizing an automated console. It passively teaches the patient how to report to a physician, again resulting in a time saving for the physician.

Several semi-automated physiological and laboratory tests are performed.

The entire patient-testing procedure only lasts about an hour and a half! HAD does not interpret the tests. HAD concentrates on the efficient and low-cost performance of routine tests.

The computer-printed reports - - with annotations by the patient's physician - - can serve as records to enclose when making referrals. The records with added diagnosis and recommendations can provide a full report when admitting a patient to a hospital. With progress notes regarding hospital treatment and disposition, the material provides the basis for a hospital summary.

Appointments for patients may be made at the patients' convenience. Call 966–4300 for further information or clip out this form and mail to:

HEALTH AUTO–DATA, INC.
4900 MASSACHUSETTS AVENUE, N.W.
WASHINGTON, D.C. 20016

FROM: DR. ____________________

STREET ADDRESS ____________________

CITY ____________________ STATE __________

ZIP CODE ____________________

TELEPHONE NUMBER ____________________

☐ SEND LISTING OF SERVICES AND FEES

☐ HAVE A REPRESENTATIVE CALL FOR APPOINTMENT TO EXPLAIN SERVICES

☐ I AM INTERESTED IN A FIRST-HAND INSPECTION OF HAD - - CALL ME TO ARRANGE A VISIT

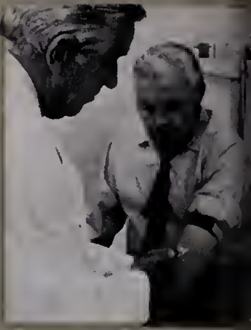
☐ I AM INTERESTED IN BEING PROCESSED THROUGH HAD FACILITY - - CALL ME TO ARRANGE AN APPOINTMENT SO I CAN INCLUDE YOUR SERIES OF TESTS IN MY ANNUAL PHYSICAL EXAMINATION. I UNDERSTAND THIS IS COMPLIMENTARY

# This "case history" runs to some 10,000 pages

This is a typical "case history" of one new drug—or, rather, a proposed new drug—assembled for submission to the U.S. Federal Food and Drug Administration. These volumes are the result of several years' work by thousands of professional and skilled personnel in just one pharmaceutical company's research laboratories, and by hundreds of physicians in medical schools, hospitals, and private practice. They cover every aspect of experience with this proposed new agent from chemical laboratory to clinic, from mouse to man. Each volume could conceivably represent hundreds of thousands of dollars of financial investment, countless hours of human effort. This veritable mountain of data stands behind every new agent offered to you by pharmaceutical manufacturers—a reassuring testimonial to the efficacy, safety and purity of the drugs you will prescribe today to lower the cost of disease to your patients.

**Pharmaceutical Manufacturers Association**
**Pharmaceutical Advertising Council**
1155 Fifteenth St., N. W., Washington, D.C. 20005

This message is brought to you as a courtesy of this publication on behalf of the producers of prescription drugs.



*in stable adult diabetes, if diet alone fails...*

start with
DBI®-TD
(phenformin HCl)
timed-disintegration capsules 50 mg.

*A Distinctive Oral Hypoglycemic*

a biguanide...
not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion.
This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

# DBI®-TD
# (phenformin HCl)
timed-disintegration capsules 50 mg.

# lowers elevated blood sugar

**How to prescribe DBI®-TD (phenformin HCl)**

**To start with DBI-TD**

| | |
|---|---|
| **Week 1** | 1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal. |
| **Week 2** | Continue effective DBI-TD dosage.<br>If necessary, add an additional capsule to the A.M. or P.M. dose. |
| **Thereafter** | Continue effective DBI-TD dosage. |

**To transfer from sulfonylurea therapy to DBI-TD alone:** The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

**To transfer from sulfonylurea therapy to combined therapy with DBI-TD:** The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

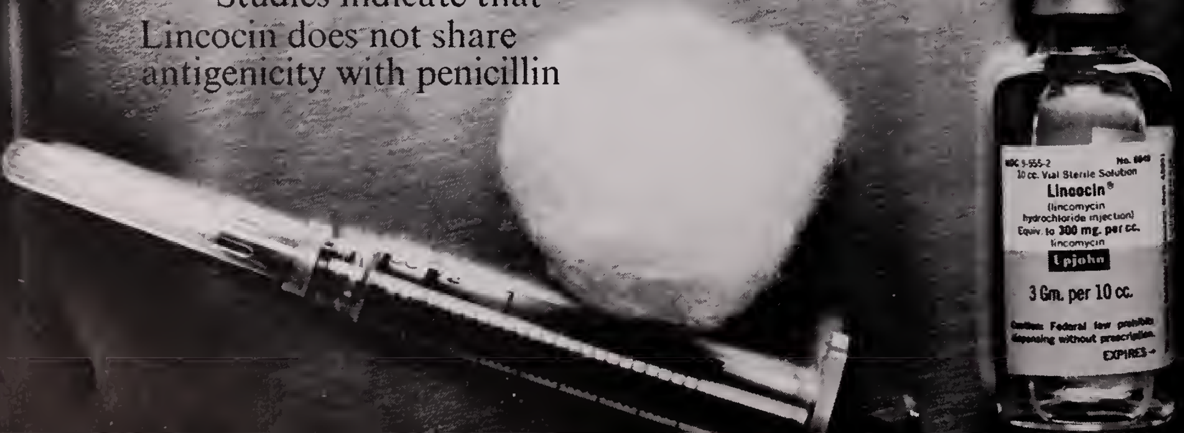
**Indications:** Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary. **Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes that is uncomplicated and well regulated on insulin; acute complications of diabetes (metabolic acidosis, coma, infection, gangrene); surgery; severe hepatic disease; renal disease with uremia; cardiovascular collapse, after disease states associated with hypoxemia. **Warning:** Use during pregnancy is to be avoided. Until adequate data on the effects of DBI on the human fetus are available, such use can be considered experimental. **Precautions: Starvation Ketosis,** which must be differentiated from "insulin lack" ketosis, and is characterized by ketonuria in spite of relatively normal blood and urine sugar, may result from excessive DBI therapy, excessive insulin reduction or insufficient carbohydrate intake. Adjustment of DBI-TD or insulin dosage, or supplying carbohydrates, alleviates this state. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING BLOOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331. Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV

# Hypersensitivity to penicillin is a good reason to consider Lincocin® (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With ß-hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.


NDC 9-555-2
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES

# So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

● Sterile Solution (300 mg. per ml.) ●

**Lincocin®**

**(lincomycin hydrochloride, Upjohn)**

NDC 9-555-2
No. 8649
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES→

© 1971 The Upjohn Company

● Sterile Solution (300 mg. per ml.) ●

# Lincocin®

## (lincomycin hydrochloride, Upjohn) for respiratory tract, skin, soft-tissue, and bone infections due to susceptible streptococci, pneumococci, and staphylococci

| Each preparation contains: | Lincomycin hydrochloride monohydrate equivalent to lincomycin base |
|---|---|
| 250 mg. Pediatric Capsule | 250 mg. |
| 500 mg. Capsule | 500 mg. |
| *Sterile Solution per 1 ml. | 300 mg. |
| Syrup per 5 ml. | 250 mg. |

*Contains also: Benzyl Alcohol 9 mg.; and, Water for Injection—q.s.

An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. *Local reactions*—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: *250 mg. and 500 mg.* Capsules—bottles of 24 and 100.

*Sterile Solution, 300 mg. per ml.*—2 and 10 ml. vials and 2 ml. syringe.

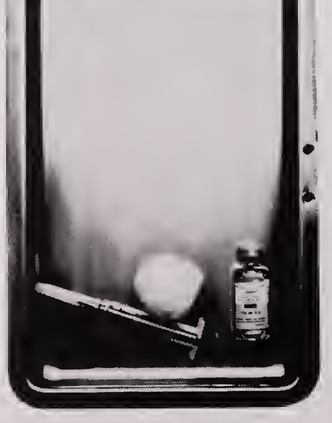
*Syrup, 250 mg. per 5 ml.*—60 ml. and pint bottles.

*For additional product information, consult the package insert or see your Upjohn representative.*

JA71-1203 MED B-5-SR (KZL-6)

The Upjohn Company
Kalamazoo
Michigan 49001

**Upjohn**



# ►OBITUARIES

## Stewart J. Johnson, M.D.
## 1914–1971

Dr. Stewart Jennings Johnson, a Washington physician for 26 years, died July 1, 1971. He lived at 1409 Hamlin Street, N.E.

Born in Providence, Rhode Island, he received his undergraduate education and his medical degree from Howard University. He interned at Homer G. Phillips Hospital in St. Louis, Missouri and did his residency at Freedmen's Hospital in Washington, D.C.

Dr. Johnson was a member of the staff of Freedmen's Hospital and served as a medical advisor for the Selective Service System.

He is survived by his wife, Adele, of the home address; a daughter, Karen, of Washington; two sons, Stewart, Jr. and Jeffrey, both of the home; his father. Jacob L. of Providence; a brother, Raymond L. of Los Angeles; and a sister, Winifred Davis, of Providence.

## Benjamin Jones, Jr., M.D.
## 1911–1971

Dr. Benjamin Jones, Jr., a Washington urologist, died June 17, 1971. He resided at 949 S Street, N.W.

A native of Norfolk, Virginia, he received his undergraduate education at the Hampton Institute in Hampton, Virginia. He received his medical degree from Howard University in 1944. He interned at the Freedmen's Hospital from 1944-1945 and was a resident at Freedmen's Hospital and the U.S. Marine Hospital in Brighton, Massachusetts.

He served as a major in the Medical Corps of the United States Air Force Reserve.

Dr. Jones was on the staffs of Cafritz Memorial, Freedmen's, Hadley Memorial and Providence hospitals. He was an assistant professor of urology at Howard University.

He was a fellow of the American College of Surgeons.

He is survived by his wife, Hattie, of the home address.

## Harvey F. Kreuzburg, M.D.
## 1911–1971

Dr. Harvey Franklin Kreuzburg, recently retired Washington physician, died June 23, 1971. He lived at Route 2, Box 213-M, Edgewater, Maryland 21037.

Dr. Kreuzburg was born in Cincinnati, Ohio on February 9, 1911. He received his undergraduate education at Georgetown University where he received his medical degree in 1937. He interned at the Garfield Hospital from 1937-1938 and served his residency there from 1938-1939. During World War II he served with the U. S. Navy in the Pacific theater, and was awarded the Silver Star and Purple Heart.

Dr. Kreuzburg had been associated with the Washington Hospital Center, Holy Cross Hospital and Surburban Hospital. He had served on the board of directors of the old Garfield Hospital.

He is survived by his wife, the former Dorothy Day Green, of the home address; three sons, F. Day of Lanham, John W., of Laurel, and Thomas, of Bel Air, Md.; three brothers, Richard T., of Rockville, Sherman of Silver Spring, and Harvey W., of Pikesville, Maryland and five grandchildren.

## Emmett H. Markwood, M.D.
## 1905–1971

Dr. Emmett H. Markwood, a Washington physician for 40 years, died June 27, 1971. He lived at 4142 River Street, Chain Bridge Forest, Virginia.

A native of Cleveland, Ohio, he received his undergraduate degree from the University of Maryland and his medical degree from Georgetown University School of Medicine in 1931. He interned at Mercy Hospital in Baltimore, Maryland from 1931-1932 and was a resident at Georgetown University Hospital from 1932-1933.

Dr. Markwood was an instructor in surgery at Georgetown from 1932-1933. He has served on the staffs of various Washington area hospitals.

He is survived by his wife, Katherine of the home address; two daughters, Valerie of New York, and Erica of Arlington; a brother, Louis of Silver Spring; and two sisters, Mrs. Donald Sands and Ruth Markwood of Chevy Chase.

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036
CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

# DOCPAC BRIEFS

Across my desk today came a list of the financial contributions by organized labor to the 1970 campaigns for the House of Representatives. These range from a high of $32,000 down to a low of $5,000, a grand total of $1,521,939,92. Of this amount, the Democrats received $1,439,000 and the Republicans received $82,000. This morning's newspaper carried a scathing denunciation of the AMA by Senator Kennedy as he steps up his campaign for total federal subsidy of the health needs of the nation. The only effective response on an organized basis that members of this Society can make is to immediately, *today*, send in your membership to DOCPAC, in care of the D. C. Medical Society. One hundred dollars makes you a sustaining member of both AMPAC and DOCPAC, $30 for a family membership, and $20 for a personal membership. Your stake in the issues involved is too great to lose by default.

KARL C. JONAS, M.D.
*Chairman, DOCPAC*

Taste!

**Dicarbosil**®
ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

*ARCH LABORATORIES*
319 South Fourth Street, St. Louis, Missouri 63102

**Complete professional liability (Malpractice)* and Personal Insurance for the Doctor.**

Employees Workmen's Compensation
Bonds on Employees
Equipment Floater
Fire Insurance Contents
Business Expense Disability
Non-Cancellable Disability Income
Auto and Home Insurance

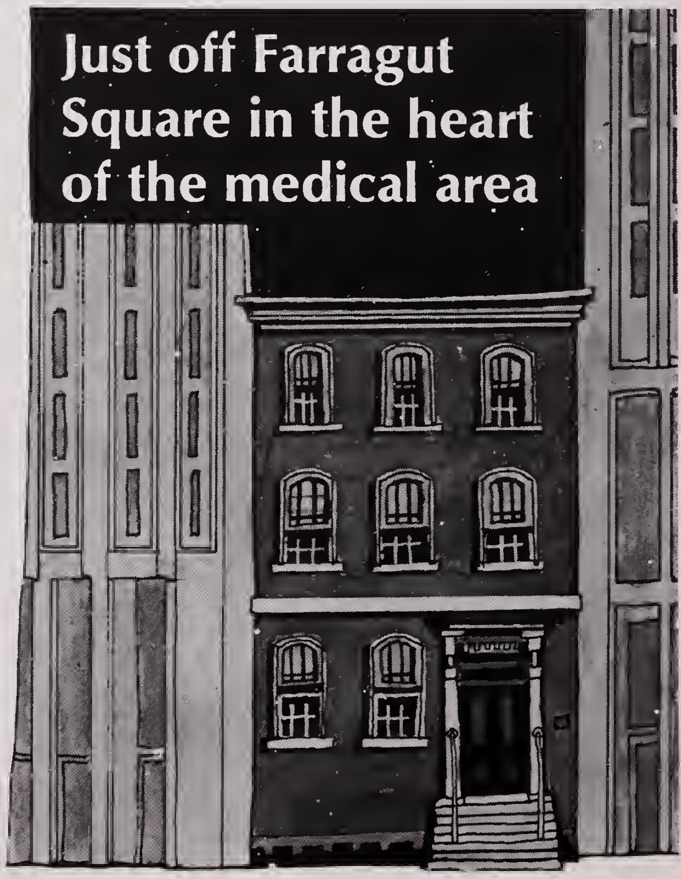
**As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*


Just off Farragut Square in the heart of the medical area

# CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

*Classified advertisements of a professional nature are free to members.*

## OFFICE SPACE AVAILABLE

FOR RENT: Office for 2 doctors, 5323 Connecticut Avenue, N. W. 3 examining rooms, 1 lab., 1 x-ray, and 1 waiting room. Contact Resident-manager, Mr. Adams, (202) 362–7847.

TO SHARE: Office space Silver Spring busy section University Blvd. West. Convenient to hospitals. Fully equipped Internist's office with Chem. Lab, x-ray, EKG, phone lines, sec'y on duty. Happy to show, discuss any timing arrangements, etc. agreeable to both. Might be good second location for one or two interested doctors. Call Dr. Datlow, (301) 593-6010.

FOR RENT: New Medical Building, 1726 Eye Street, N. W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298–6936.

FOR RENT: 1300 sq. ft. in Medical Arts Bldg., 3611 Branch Ave., Hillcrest Heights, Maryland. Modern, air-conditioned, elevator, parking. 4th floor. Rent includes utilities and janitorial service. Call Mr. Cardarelli, (301) 735–7892.

FOR RENT: Office, supplies, equipment, and medical staff services provided in completely equipped, automated testing facility. Especially suitable for Internists and General Practitioners. Desirable northwest D.C. location with ample free parking. Contact Mr. Mel Allen, (202) 966–4300.

SOUTHWEST WASHINGTON: Doctor's suite, newly decorated. In hi-rise bldg. of Capitol Park, an apt. & townhouse complex of 1739 units covering 30 acres. Large reception area, 4 rms., 2 supply closets, lab. (or kitchen) Only one MD in area. Telephone (202) 393–1513.

## PRACTICE FOR SALE

GENERAL PRACTICE: established 40 years in Mt. Pleasant area, fully equipped office, x-ray, EKG, diathermy. Call Mrs. E. H. Markwood, (703) 536–7727 or write 4142 N. River Street, Arlington, Virginia 22207.

## PHYSICIAN WANTED

WANTED: G.P. to share office. 1500 unit luxury apartment complex. No other G.P. present. Large spacious office in Arlington area. Call (703) 528–8400.

## SERVICES

MAKE YOUR WILL. Why delay? Receive 4 Will Forms and a 64-page booklet, "WILLS—How to Make and How to Break Them", written by an attorney. Just send $1.50 to Legal Forms Company, Dept. 529, 1830 Guardian Building, Detroit, Michigan 48226. (Satisfaction guaranteed.)

## POSITION WANTED

POSITION WANTED: Internist, 46 years old, Board Eligible. Two Years Fellowship in Cardiology and Assistant in active Cardiopulmonary Lab. Desires to locate in The District of Columbia. Full or Part-time. Call William E. Sill, Jr., M.D. at (301) 934–2974 or write to him in Faulkner, Maryland 20632.

## REAL ESTATE

FOR SALE: Henlopen Avenue, Rehoboth Beach. 4 bedrooms, 2 baths, Air conditioned, all electric, all appliances, all conveniences for family. Contact Dr. D. Starr, (202) Ad2-2696.

FOR SALE: Ideal doctors, dentist office/residence on close-in corner lot in Burnt Mills, Silver Spring. Beautifully landscaped and in immaculate condition. Perfectly suited to your professional needs. 3 bedrooms, each with private bath; large living room, dining room, and family room. Spacious kitchen with walkway to offices & reception area. Private entrance & separate patient parking area. Call for appointment to inspect Snider Brothers, Inc., 7730 Wisconsin Avenue, Bethesda, Maryland 20014, (301) 652–4570.

# INDEX OF ADVERTISERS

**These Advertisers Support Your Journal.**
**Please Give Them Your Support.**

*Page*

**Association**
American Association of Medical Assistants T-520

**Automated Medical Service**
Health Auto-Data, Inc. T-558

**Bank**
National Bank of Washington 2

**Business Counseling**
Data Medics T-556

**Dietetic Products**
Campbell Soup Company T-515

**Insurance**
McDermott Insurance, Inc. T-566
Mutual of Omaha 3-C
Russell, Marsh & Kennedy T-526

**Equipment and Supplies**
Kloman Surgical Supply Company T-555

**T-text**

*Page*

**Nurse Registries**
Association of Undergraduate and Practical Nurse Registry T-523
Capital Nurse Registry T-555
District of Columbia Manpower Administration T-565

**Pharmaceuticals**
Arch Laboratories T-566
Burroughs-Wellcome T-529
Dow Chemical Company T-533
C. B. Fleet Company T-549
Geigy Pharmaceuticals 4
Eli Lilly & Company 6
National Drug Company T-527–528, 9–10
A. H. Robins T-530–531
Roche Laboratories T-550–551
G. D. Searle T-516–517
Smith, Kline & French Labs. T-518
The Upjohn Company T-562–564
USV Pharmaceuticals T-559, 560–561

**Pharmacies**
Maxwell & Tennyson T-526
Peoples Drug Stores T-557

**Sanitariums**
Kalorama Convalescent Home T-526

# The causes of vaginitis are multiple

**Trichomonads . . . monilia . . . bacteria**

You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

**AVC**

**Cream** (aminocrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

**Suppositories** (aminocrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

**Contraindications:** Known sensitivity to sulfanamides.

**Precautions/Adverse Reactions:** The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfanamide toxicity are reasons to discontinue treatment.

**Dosage:** One applicatorful or one suppository intravaginally once or twice daily.

**Supplied:** Cream—Four-ounce tube with applicator. Suppositories—Box of 12 with applicator.

TRADEMARK: AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

# AVC

# The treatment is singular

A
BUILDING BLOCK
TO RECOVERY

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs
One tablet q.i.d.
Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma

**One tablet q.i.d.**

**Indications:** When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
**Contraindications:** ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
**Precautions:** It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
**Adverse Reactions:** Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
**Dosage:** One tablet q.i.d.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**
TRADEMARK BITABS U.S. PATENT NO 3,004,893 9/70 0-009A 161

# Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

# Have you protected your most valuable asset?

o've insured your
e your home, your
ı But have you
sred your most
l able asset — your
ity to earn an
ome?

ou were disabled
orrow by a serious
ess or accident how
ıld your family be able to meet your
ncial obligations — the payments on your
ne, your car, the grocery bill and the
ıerous other bills that are a regular part
everyday living?

tect your income now with the Disability
ome Protection Plan available to you as
ıember of the Medical Society of the
trict of Columbia.

**PAYS UP TO $225.00 A WEEK**
**when you're sick or hurt and can't practice!**

The benefits provided by this remarkable plan are TAX-FREE, yours to use as you see fit. Payable directly to you regardless of any other coverage you may have.

What's more, your coverage is guaranteed renewable while the program remains in force regardless of the amount of benefits paid to you or any future changes in your health.

And thanks to the mass purchasing power of your Society, you are able to purchase this protection at special rates that save you money.

So get all the facts on this primary insurance protection today! Complete and mail the coupon below. You'll receive free facts without obligation.

*Endorsed by The Society for Over Twenty Successful Years*

UNDERWRITTEN BY

**Mutual of Omaha®**
*The Company that pays*
Life Insurance Affiliate: United of Omaha

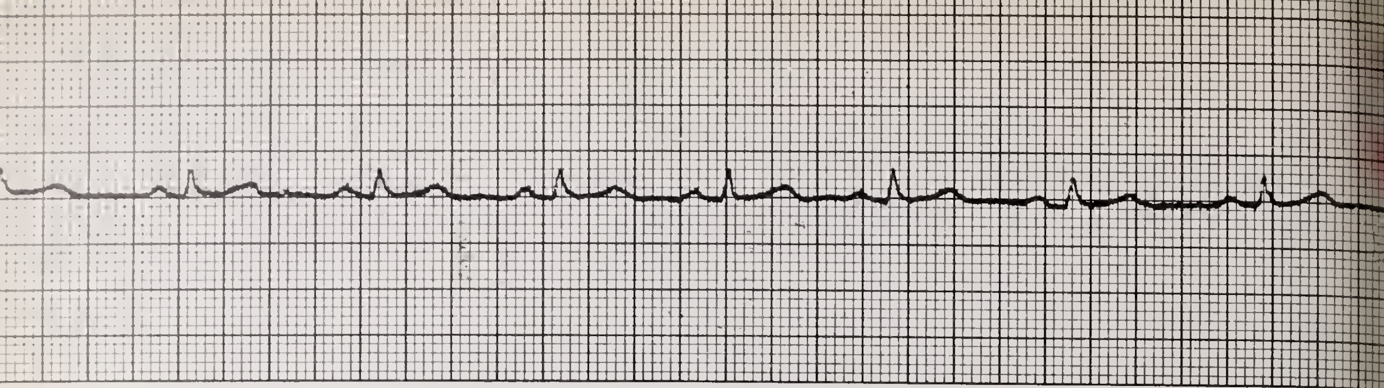
**Joseph E. Jones, Administrator**
**1666 Connecticut Avenue, N.W.**
**Washington, D. C. 20009 Phone (202) 483-3100**

Please rush me free facts on the special Disability Income Protection plan available to me as a member of the Medical Society of the District of Columbia.

Name______________________________

Address______________________________

City____________State________ZIP________



# When disease is ruled out and psychic tension is implicated

# Valium® (diazepam)

## 2-mg, 5-mg, 10-mg tablets

# helps relax the patient and relieve his somatic symptoms

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose™ packages of 1000.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

*Volume 40 · Number 9 · September 1971*

# MEDICAL ANNALS of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

## VETERANS ADMINISTRATION HOSPITAL NUMBER

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
5 NOV 1971

**Toxic Manifestations of Busulfan Therapy**
Willard A. Burns, M.D., William McFarland, M.D.
and Mary J. Matthews, M.D.

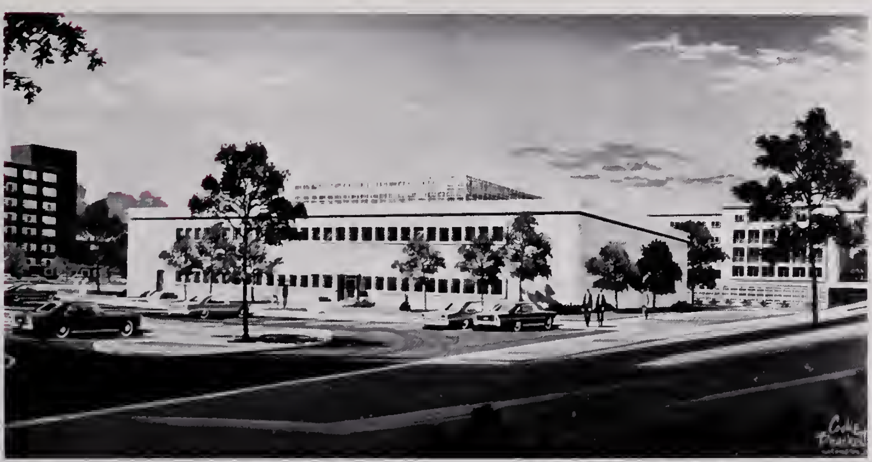
**Herpes Zoster Treated With Cytosine Arabinoside**
Barbara A. Neilan, M.D. and
Geraldine P. Schechter, M.D.

**Neuropacemaker for Relief of Intractable Pain**
John L. Fox, M.D.

**Therapeutic Developments in Lung Cancer**
Heine H. Hansen, M.D. and Oleg S. Selawry, M.D.

**Cold...Man's Assiduous Remedy**
Alfred R. Henderson, M.D.

**Significance of Circulating Proinsulin**
Raul A. Gutman, M.D. and Lillian Recant, M.D.



An Architect's concept of the Washington Veterans Administration Hospital's new research building to be opened in the Spring, 1972. The local staff is responsible for one of the largest, most productive research programs in the VA system.

25 Shattuck St.
Boston, Mass. 02115

# Patients fell asleep quickl

Dalmane (flurazepam HCl) 30 mg reduced awake time—both before and after falling asleep - by fifty percent of pretreatment values in patients with insomnia.[1,2]

Two sleep laboratory studies recently confirmed findings of earlier studies of this type, namely, that Dalmane 30 mg was effective in patients who had trouble falling asleep, staying asleep or both. One 30-mg capsule of Dalmane usually induced sleep within 22 minutes, decreased the number of awakenings and the wake time after the onset of sleep, and provided 7 to 8 hours of sleep without need to repeat dosage during the night.

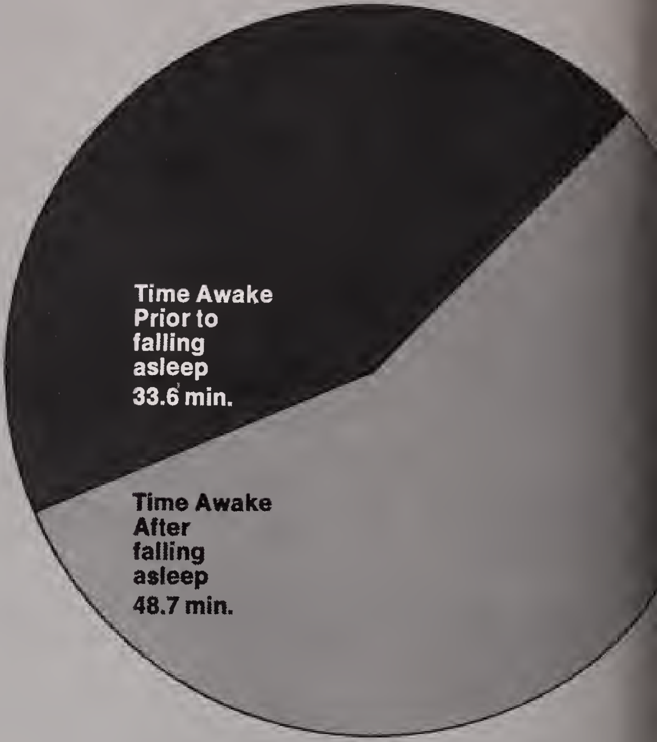
These studies utilized identical protocols and included eight insomniac patients. Sleep laboratory measurements in a limited number of patients are derived from all-night electroencephalographic, electro-oculographic and electromyographic tracings. Unlike traditional methods of evaluation, they are quantitative, reproducible and projectable to large numbers of subjects.

Results shown represent average values in all subjects for the three consecutive nights of placebo administration prior to Dalmane therapy and the seven consecutive nights on Dalmane 30 mg.

Dalmane is also relatively safe, as reported in clinical studies. Instances of morning "hangover" have been relatively infrequent; paradoxical reactions (excitement) and hypotension have been rare. Dizziness, drowsiness, lightheadedness and the like were the side effects noted most frequently, particularly in the elderly or debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

**References: 1.** Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.
**2.** Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.

Before
Dalmane
(flurazepam HCl)



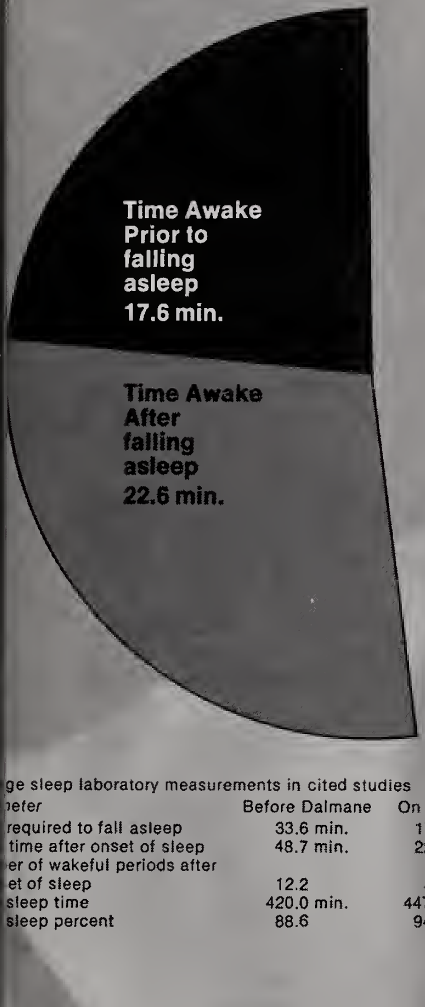
Measurements of sleep in the sleep laboratory are obtained with electroencephalographic, electro-oculographic and electromyographic recordings.

# and slept through the night

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

3 NOV 1971

On
Dalmane
(flurazepam HCl)



ge sleep laboratory measurements in cited studies

| eter | Before Dalmane | On Dalmane |
|---|---|---|
| required to fall asleep | 33.6 min. | 17.6 min. |
| time after onset of sleep | 48.7 min. | 22.6 min. |
| er of wakeful periods after et of sleep | 12.2 | 8.4 |
| sleep time | 420.0 min. | 447.5 min. |
| sleep percent | 88.6 | 94.5 |

## nical effectiveness as oven in the sleep laboratory

# Dalmane®

## lurazepam HCl)

**30-mg capsule h.s.—usual adult dosage.**
**15-mg capsule h.s.—initial dosage for rly or debilitated patients.**

**Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

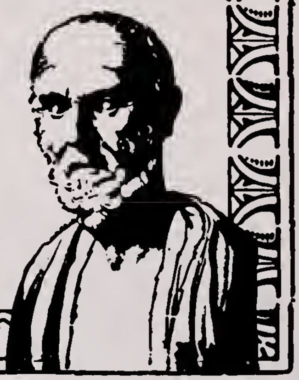
**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



"Healing is a matter of time,
but sometimes also of
opportunity."

Hippocrates, *Precepts*, Chapt. I

**and so is money-management**

After an initial exploratory examination of your finances by The National Bank of Washington, we can prescribe a course of action that will ensure your fiscal health through good times and bad.

Do you want to prepare for your family's security? There are all kinds of trusts and investments that can be established to suit your particular wants and needs.

Do you want to start a college trust fund to provide for your children's education at a time in your life when you might want to slow down? Our Trust Department knows just how to help you to do this.

How much should you invest in stocks and bonds? Our Investment Department won't give you a rule-of-thumb, but it will give you a plan as individual as you are.

Is the chore of day-to-day banking taking too much of your time or the time of your professional staff? Our bank provides you with prepaid, self-addressed envelopes that allow you to handle your checking or savings accounts right at your desk—at no cost to you.

Are you tired of paying monthly service charges on your checking account? At The National Bank of Washington, if you maintain a minimum balance of $300 in your regular personal checking account, there are no service charges.

Do you want to buy some special professional equipment, attend an international medical meeting overseas, buy another car or boat? At The National Bank of Washington you can get a consumer loan for a mere 8% annual percentage rate.

For *any* questions on money management, consult The National Bank of Washington. Twenty convenient locations. Main office: 14th and G Streets, N.W. 624-3000. Member FDIC.

The National
**BANK OF
WASHINGTON**

VOLUME 40 • SEPTEMBER 1971

**EDITOR**
Wallace M. Yater, M.D.

**ASSOCIATE EDITOR**
Raymond Scalettar, M.D.

**ASSISTANT EDITOR**
Judith E. Perruso

**MANAGING EDITOR**
Francisco P. Ferraraccio

**EDITORIAL BOARD**
Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**
Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Leslie E. Hedgepath, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

MEDICAL
ANNALS
of the
DISTRICT OF
COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to the Editorial Offices, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

Short-acting diuretics may create abrupt, inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

**Hygroton® chlorthalidone USP**

Makes water, not waves.

You know diuretics medically.

But have you met them socially?

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-9

**MEDICAL ANNALS**
**of the District of Columbia**

# *Contents for September*

## VETERANS ADMINISTRATION HOSPITAL NUMBER

### SCIENTIFIC ARTICLES

Toxic Manifestations of Busulfan Therapy. *Willard A. Burns, M.D., William McFarland, M.D.* and *Mary J. Matthews, M.D.*, Washington 567

Disseminated Herpes Zoster: Treatment with Cytosine Arabinoside. *Barbara A. Neilan, M.D.* and *Geraldine P. Schechter, M.D.*, Washington 573

Neuropacemaker for Relief of Intractable Pain. *John L. Fox, M.D.*, Washington 577

Recent Therapeutic Developments in Lung Cancer. *Heine H. Hansen, M.D.* and *Oleg S. Selawry, M.D.*, Washington 580

Cold . . . Man's Assiduous Remedy. *Alfred R. Henderson, M.D.*, Washington 583

Clinical Significance of Circulating Proinsulin. *Raul A. Gutman, M.D.* and *Lilliam Recant, M.D.*, Washington 589

### EDITORIALS

Rebel With a Cause 615

### SPECIAL SECTION

History of the Medical Society of the District of Columbia. Epilogue. *Theodore Wiprud* 607

### MISCELLANY

President's Page: "Incorporation in the District of Columbia" 598

Report of the Delegates to the AMA 616

D.C. Mental Health Administration: "Mobile Mental Health Units" 617

D.C. Health Notes: "Health Services in the Community" 619

Book Reviews 625

Obituaries 628

Community Health Week 629

New Members 629

General News 631

Meetings 632

*Classified Advertisements* *Adv. 25*

*Medical Annals Staff and Officers of the Medical Society* *Adv. 3*

*Index of Advertisers* *Adv. 26*

---

Copyright ©, 1971 by The Medical Society of the District of Columbia. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

This photograph in no way implies
an endorsement of Norgesic by
oe Namath
WHEN TRAUMA
RESULTS IN PAIN

# NORGESIC®

(orphenadrine citrate, 25 mg.: aspirin, 225 mg.:
phenacetin, 160 mg.: caffeine, 30 mg.)

the versatile analgesic

offers fast onset of symptomatic relief

produces a high level of analgesia

affords sustained pain relieving action

provides predictable relief—
overall satisfactory response in
approximately 80% of patients

**Contraindications:** Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.
Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).
**Warnings:** USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.
USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.
**Precautions:** It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.
**Adverse Reactions:** Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established.
**Dosage and Administration:** Adults – 1 to 2 tablets 3 to 4 times daily.

**Riker Laboratories, Inc.**
NORTHRIDGE, CALIFORNIA 91324
A SUBSIDIARY OF 3M COMPANY

orgesic...the versatile analgesic
rovides effective analgesia and relief
f associated muscle spasm

Following discharge the patient's pulmonary function remained stable. Leukeran (Chlorambucil) was started in October, 1968. The white blood cells ranged between 30,000 and 125,000 with 1-2% blasts. In March, 1969, following an upper respiratory infection, the patient developed dyspnea on exertion which became progressively worse. He was admitted to this hospital in May, 1969 for further evaluation. The blood pressure was 100/60, the rate pulse 120, the temperature 97°F, and the respiratory rate 30. There were oral mucosal lesions suggestive of moniliasis. The lungs revealed bilateral scattered rales which were most noticeable in the bases. The liver was 3 finger-breadths below the right costal margin. The hematocrit was 37%, the white blood cells 30,000 with 82% neutrophils, 2% lymphocytes, 8% basophils, 8% metamyelocytes, and the platelet count was 277,000. Pulmonary function, as evaluated by pulmonary function tests, had deteriorated significantly from 1968. Chest X-ray films were essentially similar to those taken in June, 1968. It was thought that the patient possibly had a progression of his Busulfan lung, and he was placed on 80 mg of Prednisone daily. In addition, he was given topical and oral Mystatin for the monilial infection and penicillin parenterally for what was thought to be a superimposed pneumonia.

Initially he showed improvement. One week later, however, he developed a shaking chill and fever. The penicillin was discontinued. Cultures were made of the blood, urine and sputum. All were negative except for Candida from the oral cavity scrapings. Because of the progressive deterioration and febrile course, it was thought that the patient might be harboring an unusual infection. He was therefore place on Keflin, Kanamycin, and Amphotericin B. A 10-day course of Pentamidine isethionate was also given with the thought that the patient could be infested by *Pneumocystis carinii.* The patient's condition continued to deteriorate and he experienced a respiratory arrest followed by a cardiac arrest from which he could not be resuscitated on June 14, 1969.

At autopsy the biopsy of the right lower lobe in 1968 was firm, fibrous, and poorly crepitant. Microscopic sections (figure 1) revealed the pulmonary architecture to be markedly distorted by intra-alveolar and interstitial fibroblasts infiltrated by chronic inflammatory cells. Alveolar spaces contained organizing fibrin, clusters of macrophages, leukcocytes, and giant epithelial cells. The alveolar walls were lined by swollen epithelial cells, some of which were giant in size and multinucleated. Individual cells had enlarged to giant irregular hyperchromatic or vesicular nuclei and abundant cytoplasm. Occasional cells had prominent single or double nuclei or enlarged acidophilic nuclear inclusions. Special stains demonstrated no organisms.

The pertinent gross findings were limited to the lungs and testes. The right lung weighed 860 gm, the left lung 750 gm. The pleural surfaces of both lungs showed focal fibrinous pleuritis. They were firm, bulky, and non-crepitant. The cut surfaces had a consolidated, pale grayish-yellow granular appearance and appeared to be airless. Some blood and foamy white fluid could be expressed on pressure. The testes were small and atrophic. The adrenals weighed 6 and 7 gm respectively. The liver weighed 1550 gm and the spleen 270 gm.

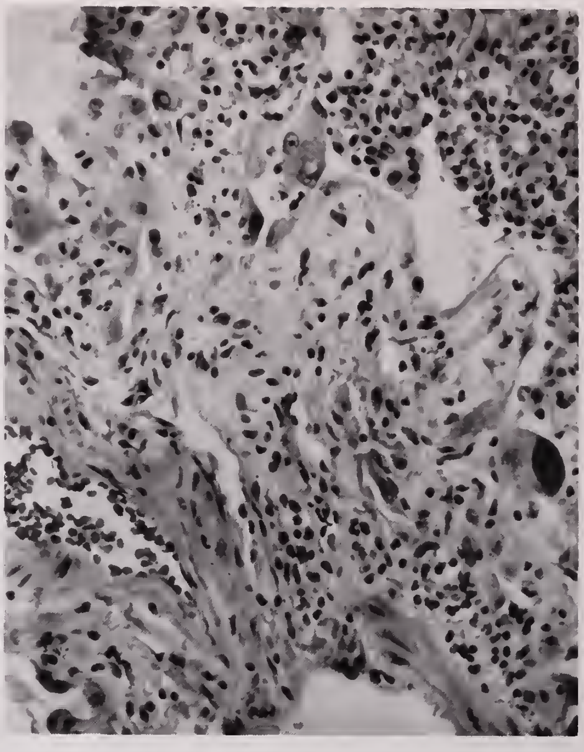


**FIG 1. Biopsy specimen showing extensive pulmonary fibrosis and atypical alveolar lining cells. (hemotoxylin and eosin × 220)**

Sections of lung taken at random and from the site of previous biopsy were essentially similar to the biopsy specimen taken a year previously. In all lobes there was a marked distortion of pulmonary architecture by a predominantly interstitial fibrosing process (figure 2). In contrast to the biopsy specimen, the alveolar spaces were identifiable in most areas and frequently were filled with a foamy material that contained oval and crescent-shaped organisms that were Gomori-Methenamine Silver-positive (figure 3).

Other alveoli contained macrophages, minimal organizing fibrin and leukocytes. Alveolar walls and bronchi were still lined by swollen epithelial cells, some of which were giant and multinucleated and contained prominent single or double nucleoli or acidophilic nuclear inclusions (figure 4, A and B). These lining cells were similar but much fewer in number than those seen in the biopsy. The thyroid, adrenals, kidneys, pancreatic acini and seminal vesicles all demonstrated cellular atypia of some of the epithelial cells (figure 4, C and D). Sections of the

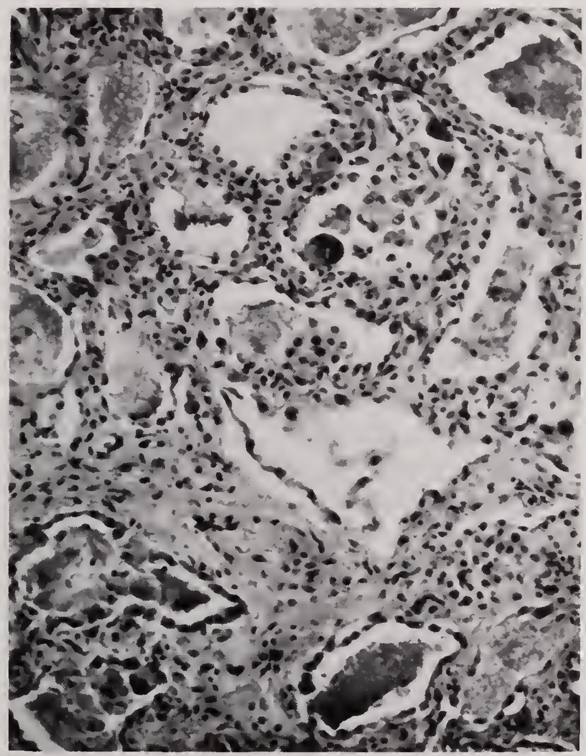


FIG 2. Autopsy lung showing interstitial fibrosis, some atypical lining cells and foamy material in alveolar spaces.

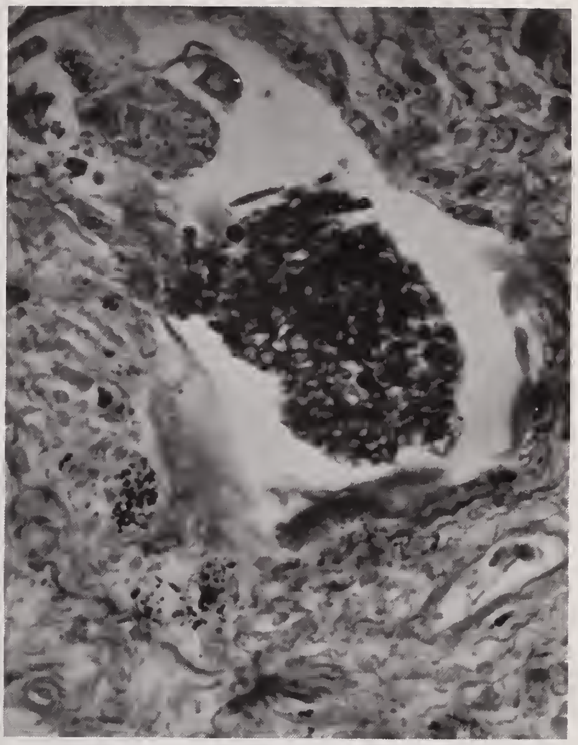


FIG 3. Oval and crescent-shaped organisms in alveolar.

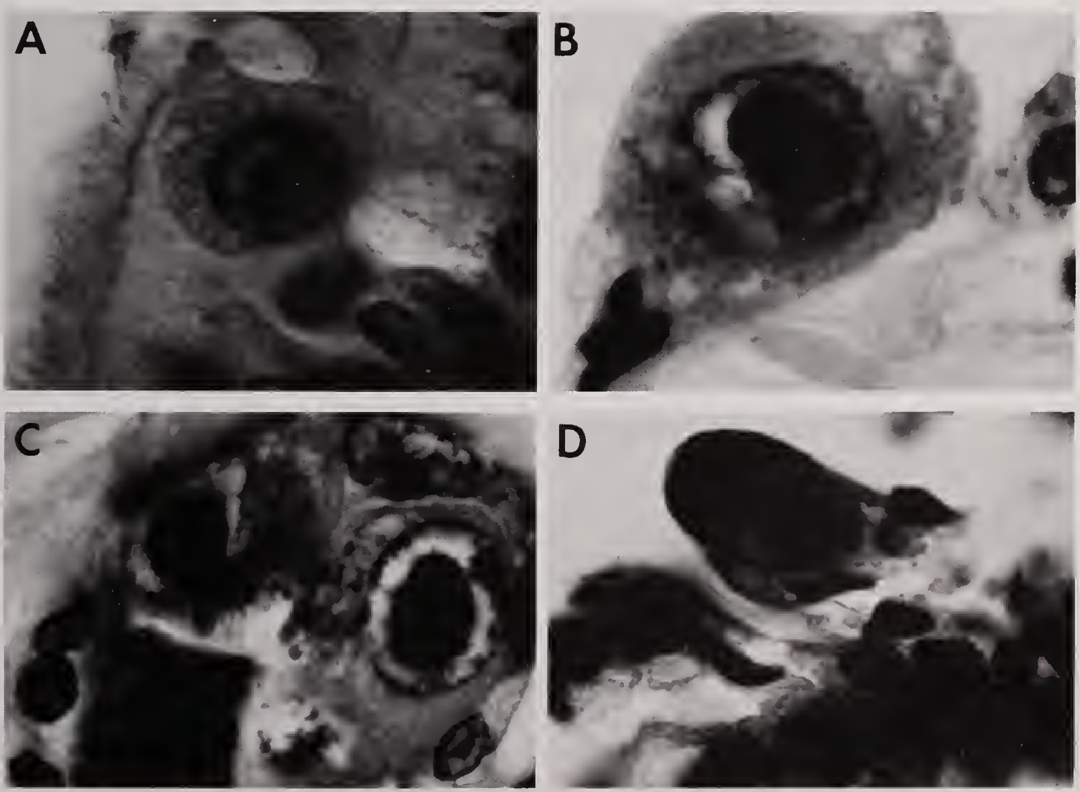


FIG 4. Atypical epithelial cells with prominent nuclear inclusions: A. bronchus (×1260) B. alveolar lining cell (×1638) C. thyroid (× 1260) D. seminal vesicle (× 1260). (All hematoxylin and eosin)

testes demonstrated peritubular fibrosis and focal hyalinization of tubules. No cellular atypia was noted. In the pancreas some of the islets showed peri-sinusoidal hyalinization. The adrenals were unremarkable. Liver parenchymal cells demonstrated glycogen degeneration of hepatic nuclei. The bone marrow was hypercellular and compatible with an exacerbated chronic myelogenous leukemia. Interspersed within the marrow were clumps of histiocytic cells containing foamy material suggestive of 'Gaucher-like' cells. Foci of leukemic cells were seen in the spleen and to a minimal extent in the lung, kidneys and liver.

## Discussion

Busulfan is an alkylating agent which affects desoxyribonucleic acid.[2-4] These agents are known mitotic inhibitors and in experimental systems have been shown to be radiomimetic, mutagenic, teratogenic, and to have carcinogenic properties.[5-14] Galton[15] described hyperpigmentation and bone-marrow depression in a few of his original 19 patients treated with Busulfan. Subsequently he and others have reported varying toxic manifestations (table 1).[16-88] The incidence of hyperpigmentation appears to be lower in light skinned[41] and higher in darker skinned individuals.[29] It is rarely seen in patients with chronic myelogenous leukemia without Busulfan treatment.[89,90] The pigmentation tends to be diffuse, involving unexposed as well as exposed areas. Rarely are the mucous membranes subjected to this change.[45] Kyle[44] advanced the hypothesis that Busulfan interferes with the sulfhydril groups, releasing inhibitors of melanin formation and inducing pigmentation. This patient's hyperpigmentation was diffuse, did not involve the oral mucosa, and did not regress during the year prior to death when Busulfan was withheld.

In some patients the hyperpigmentation is associated with a syndrome resembling Addison's disease, i.e., severe weakness, fatigue, anorexia, nausea, and weight loss.[43-45,60,62,66-68] In 1968 this patient manifested symptoms suggestive of this Addisonian-like syndrome; urinary steroids were within normal limits. Rather than being hypoglycemic he was periodically hyperglycemic. In this case, as in others described in the literature, there was no confirmation of an Addisonian state. Persson and Soderstrom[69] were unable to find an actual case of adrenal insufficiency accompanying chronic leukemia. There are, however, reports of decreased urinary output of 17-hydroxcorticosteroids and failure to respond to corticotrophin stimulation in the first 24 hours[67] and of a delayed response to ACTH stimulation.[68]

In 1960, Waller[61] noted nuclear abnormalities in many organs in a male patient treated for about 2 years with Busulfan. Subsequent reports[2,41,59,60,62-65] have confirmed Waller's observation of atypical cells, often with hyperchromatic nuclei and many with giant nuclei in almost all tissues of some patients treated with Busulfan. These changes have been so extreme in some cases as to mimic carcinoma in situ of the cervix.[2,63] Our case demonstrated cellular atypia in alveolar lining-cells as well as in bronchial epithelium. Some of the cells contained, like the biopsy specimen, nuclear inclusions highly suggestive of cytomegalic inclusion disease. Epithelial cells of the thyroid, pancreas, adrenals, kidneys and seminal vesicles also demonstrated atypia. Mesenchymal cells were not atypical. Quantitatively these cells are fewer in the lung at autopsy than in the biopsy specimen taken a year before. Since Busulfan was discontinued after the lung biopsy, we assume that this could be explained by cell turnover during the year when no Busulfan was administered. The absence of atypia in the gastrointestinal tract and the sparsity in other organs supports this assumption.

Pulmonary fibrosis associated with Busulfan therapy was first described by Oliner in 1961. Since then a number of cases have been reported.[1,2,41,66,70-75] In each instance an interstitial and/or intra-alveolar pulmonary fibrosis with associated cellular atypia of lining cells has been described. The picture is similar to that induced by hexamethonium[91,92] and is probably due to the

**TABLE 1**

Toxic Effects of Busulfan (Myleran)

| | REFERENCES |
|---|---|
| Bone marrow depression | 15-40 |
| Hyperpigmentation | 15, 21, 23, 26, 27, 29, 30, 32, 33, 38, 41-49 |
| Gynecomastia | 25-27 |
| Amenorrhea | 2, 16, 19, 25, 27, 30, 32, 34-36, 50 |
| Sterility, Gonadal Atrophy | 50-58 |
| Cytologic atypia | 2, 41, 59-65 |
| Addisonian-like syndrome | 43-45, 60, 62, 66-69 |
| Pulmonary fibrosis | 1, 2, 41, 66, 70-75 |
| Carcinogenic (?) | 2, 60, 63, 70, 71, 76, 77 |
| Teratogenic (?) | 59, 78 |
| Porphyria cutanea tarda | 79 |
| Cataracts | 80-85 |
| Myasthenia gravis | 86 |
| Erythema nodosum | 43 |
| Osteomyelosclerosis | 87 |
| G. I. and Liver reactions | 23, 42, 43, 88 |
| Rashes, Alopecia | 88 |
| Hyperurecemia | 39 |

radiomimetic properties of the drug. Irradiation and alkylating agents apparently provoke quite similar effects.[93] In our case the cellular atypia was markedly diminished, there was minimal intra-alveolar fibrosis, and there was prominent residual interstitial fibrosis in the interval between biopsy and death. In correlation, the patient's pulmonary status appeared to remain stable after the drug was withdrawn until the appearance of the respiratory infection and the terminal infestation with *Pneumocystis carinii.*

*Pneumocystis carinii* is increasingly being diagnosed in patients with neoplasia, especially leukemia, treated with immunosuppressive chemotherapy.[94-96] To our knowledge it has never been reported in association with Busulfan-induced pulmonary disease and rarely, if ever, superimposed on chronic pulmonary disease. It has been reported in patients treated with Chlorambucil as was this patient during the year he received no Busulfan therapy.[94]

Experimentally Busulfan has been demonstrated to have an effect on the developing as well as the mature gonads of the rat.[51-58] Kenis[50] reported a case of a patient who developed testicular atrophy while on Busulfan therapy. Our patient demonstrated testicular atrophy similar to that described by others in animals as well as man.

We have been unable to find any other report of hyalinization of the Islets of Langerhans in patients treated with Busulfan. Since this was a focal phenomenon it would be difficult to directly attribute the process to Busulfan.

The "Gaucher-like" cells seen in the bone marrow were also seen in the bone marrow aspirates while the patient was on Busulfan therapy. The presence of these cells most probably reflects the prolonged course of the patient's leukemia rather than a "toxic manifestation" of Busulfan.

## Summary

A case of chronic myelogenous leukemia in a 53-year-old white man treated for 10 years with Busulfan has been reported. The patient developed diffuse pulmonary disease and an Addisonian-like syndrome. At autopsy there was marked interstitial pulmonary fibrosis, cellular atypia in many organs, testicular atrophy, and focal hyalinization of the Islets of Langerhans. He terminally developed *Pneumocystis carinii* pneumonia and had "Gaucher-like" cells in the bone marrow. The pulmonary cellular atypia and the intra-alveolar fibrosis regressed from a biopsy taken a year before death. A survey of the pertinent literature of Busulfan toxicity is included.

## Acknowledgments

The writers thank Mrs. P. Hoffman for her assistance in preparing the manuscript and Mr. Charles Swassing of the Medical Illustration Department, Veterans Administration Hospital, Washington, D. C. for the photomicrographs.

## References

1. BURNS, W. A., MCFARLAND, W., AND MATTHEWS, M. J.: Amer. Rev. Resp. Dis., 1970, 101, 408.
2. KOSS, L. G., MELAMED, M. R., AND MAYER, K.: Amer. J. Clin. Path., 1965, 44, 385.
3. KOSS, L. G.: Lab. Invest., 1967, 16, 44.
4. WHEELER, G. P.: Cancer Res., 1962, 22, 651.
5. AUERBACH, C.: Ann. N. Y. Acad. Sci., 1958, 68, 731.
6. BOYLAND, E.: Bull. Un. Int. Cancer, 1964, 2, 6.
7. GELFANT, S.: Int. Rev. Cytol., 1963, 14, 1.
8. MURPHY, M. L., DEL MORO, A., AND LACON, C.: Ann. N. Y. Acad. Sci., 1958, 68, 762.
9. POWERS, E. L., AND POMEROY, J. H.: Ann. N. Y. Acad. Sci., 1958, 68, 702.
10. SHIMKIN, M. B.: Cancer, 1954, 7, 410.
11. WALPOLE, A. L.: Ann. N. Y. Acad. Sci., 1958, 68, 750.
12. KOLLER, P. C.: Ann. N. Y. Acad. Sci., 1958, 68, 783.
13. KOLLER, P. C.: Heredity, 1953, 6 (Suppl.), 181.
14. CONKLIN, J. W., UPTON, A. C., AND CHRISTENBERRY, K. W.: Cancer Res., 1965, 25, 20.
15. GALTON, D. A. G.: Lancet, 1953, 1, 208.
16. GALTON, D. A. G.: Seminars Hemat., 1969, 6, 323.
17. NELSON, M. G., AND LOWRY, J.: Irish J. Med. Sci., 1957, 7, 186.
18. SCHILLING, R. F., AND MEYER, O. O.: New Eng. J. Med., 1956, 254, 986.
19. TURESSON, D.: Brit. J. Haemat., 1957, 3, 220.
20. UNUGUR, A., SCHULMAN, E., AND DAMESHEK, W.: New Eng. J. Med., 1957, 256, 727.
21. WINTROBE, M. M., CARTWRIGHT, G. E., FESSAS, P., HAUT, A., AND ALTMAN, S. J.: Ann. Inst. Med., 1954, 41, 447.
22. HAUT, A., ALTMAN, S. J., CARTWRIGHT, G. E., AND WINTROBE, M. M.: Arch. Intern. Med., 1955, 96, 451.
23. HAUT, A., ABBOTT, W. S., WINTROBE, M. M., AND CARTWRIGHT, G. E.: Blood, 1961, 17, 1.
24. SPRUNT, J. G., AND RIZZA, C. R.: Brit. Med. J., 1966, 1, 736.
25. GALTON, D. A. G., AND TILL, M.: Lancet, 1955, 268, 425.
26. GALTON, D. A. G.: Advance Cancer Res., 1956, 4, 73.
27. GALTON, D. A. G., TILL, M., AND WILTSHAW, E.: Ann. N. Y. Acad. Sci., 1958, 68, 967.
28. HAYHOE, F. G. J., AND KOK, D.: Brit. Med. J., 1957, 2, 1468.
29. DESAI, R. G.: Acta Haemat. Jap., 1959, 22, 160.
30. LOUIS, J., LIMARZI, L. R., AND BEST, W. R.: Arch. Intern. Med., 1956, 97, 299.
31. LOUIS, J., BEST, W. R., AND LIMARZI, L. R.: J. Lab. Clin. Med., 1954, 44, 893.
32. GRIEG, H. B. W.: Acta. Haemat., 1956, 16, 171.
33. GRIEG, H. B. W.: S. Afr. Med. J., 1956, 30, 357.
34. LOUIS, J., LIMARZI, I. R., AND BEST, W.: Arch. Intern. Med., 1956, 97, 299.
35., GHOSE, S., AND CHATTERJEA, J. B.: J. Indian Med. Ass., 1960, 34, 381.
36. BELOHORSKY, B., SIRACKY, J., SANDOR, L., AND KLAUBER, E.: Neoplasma, 1960, 7, 397.
37. LEVIN, W. C., THADDEUS, A. P., VAUGHAN, J. R. L., and TSAI, S. Y.: J. Lab Clin. Med., 1954, 44, 890.

38. WILKINSON, J. F.: Proc. Roy. Soc. Med., 1953, 46, 685.
39. HYMAN, G. A., AND GELHORN, A.: J.A.M.A., 1956, 161, 844.
40. WEATHERALL, D. J., GALTON, D. A. G., AND KAY, H. E.: Brit. Med. J., (March 8) 1969, I, 638.
41. SMALLEY, R. V., and WALL, R. L.: Ann. Intern. Med., 1966, 64, 154.
42. RITZ, N. D., AND KRIM, M.: New York J. Med., 1959, 59, 4602.
43. MARINHO, H. M., AND MARTINS, P. C.: Arq. Brasil. Med., 1956.46, 161.
44. KYLE, R. A., SCHWARTZ, R. S., OLINER, H. L., AND DAMESHEK, W.: Blood, 1961, 18, 497.
45. CALERO, C.: Arch. Med. Panamen., 1964, 12, 101.
46. WILKINSON, J. F., AND TURNER, R. L.: Chemotherapy of chronic myeloid leukemia, with special reference to Myleran, Progress in Hematology, L. M. Tocantins, Ed. Grune and Stratton: New York, 1959, Vol. 2, p. 225.
47. PETRAKIS, N. L., BIERMAN, H. R., KELLY, K. H., WHITE, L. P., AND SHIMKIN, M. B.: Cancer, 1954, 7, 383.
48. SPURR, C. L., WILSON, W. L., AND MCDONALD, J. F., JR.: Southern Med. J., 1956, 49, 847.
49. VAHLQUIST, B., AND VUILLE, J. C.: Acta Paediat., 1960, 49, 795.
50. KENIS, Y., DUSTIN, P., HENRY, J. A., AND TAGNON, H. J.: Rev. Franc. Etud. Clin. Biol., 1956, 1, 435.
51. HEMSWORTH, B. N., AND JACKSON, H.: J. Reprod. Fertil., 1963, 5, 187.
52. JACKSON, H., PARTINGTON, M., AND FOX, B. W.: Nature (London), 1962, 194, 1184.
53. HEMSWORTH, B. N., AND JACKSON, H.: J. Reprod. Fertil., 1963, 6, 229.
54. CRAIG, A. W., FOX, B. W., AND JACKSON, H.: Nature (London), 1958, 181, 353.
55. JACKSON, H., FOX, B. W., AND CRAIG, A. W.: J. Reprod. Fertil., 1961, 2, 447.
56. JACKSON, H.: Brit. Med. Bull., 1964, 20, 107.
57. JACKSON, H., FOX, B. W., AND CRAIG, A. W.: Brit. J. Pharmacol., 1959, 14, 149.
58. HELLERN, R. H., AND JONES, H. W., Jr.: Amer. J. Obstet. Gynec., 1964, 89, 414.
59. DIAMOND, I., ANDERSON, M. M., AND MCCREADIE, S. R.: Pediatrics, 1960, 25, 85.
60. NELSON, B. M., AND ANDREWS, G. A.: Amer. J. Clin. Path., 1964, 42. 37.
61. WALLER, U.: Path. Microbiol., 1960, 23, 283.
62. WARD, H. N., KONIKOV, N., AND REINHARD, E. H.: Ann. Intern. Med., 1965, 63, 654.
63. GURELI, N., DENHAM, S. W., AND ROOT, S. W.: Obstet. Gynec., 1963, 21, 466.
64. KOSS, L. G.: Diagnostic cytology and its histopathologic bases, Philadelphia: J. B. Lippincott, Co., 1961, p. 380.
65. FORNI, A. M., KOSS, L. G., AND GELLER, W.: Cancer, 1964, 17, 1348.
66. HARROLD, B. P.: Brit. Med. J., 1966, 1, 463.
67. Case record of the Massachusetts General Hospital, case number 3-1965, New Eng. J. Med., 1965, 272, 95.
68. VIVACQUA, R. J., HAURANI, I., AND ERSLEY, A. J.: Ann. Intern. Med., 1967, 67, 380.
69. PERSSON, S., AND SODERSTROM, N.: Acta Haemat. (Basel), 1962, 27, 345.
70. OLINER, H., SCHWARTZ, R., RUBIO, F., AND DAMESHEK, W.: Amer. J. Med., 1961, 31, 134.
71. FEINGOLD, M. L., AND KOSS, L. G.: Arch. Intern. Med., 1969, 124, 66.
72. KYUNG-WHAN, M., AND GYORKEY, F.: Cancer, 1968, 22, 1027.
73. LEAKE, E., SMITH, W. G., AND WOODLIFF, H. J.: Lancet, 1963, 2, 432.
74. HEARD, B. E., AND COOKE, R. A.: Thorax, 1968, 23, 187.
75. LITTLER, W. A., KAY, J. M., AND HASELTON, P. S.: Thorax, 1969, 24, 639.
76. KOSS, L. G.: Diagnostic cytology and its histopathologic bases, Philadelphia: J. B. Lippincott Co., 1968, ed. 2, p. 288.
77. ANGUS, H. B., AND GUNZ, F. W.: Blood, 1963, 22, 88.
78. DUGDALE, M., AND FORT, A. T.: J.A.M.A., 1967, 199, 131.
79. KYLE, R. A., AND DAMESHEK, W.: Blood, 1964, 23, 776.
80. GRIMES, P., AND VON SALLMANN, L.: Exp. Cell Res., 1966, 42, 265.
81. KANDORI, F., AND KURIMOTO, S.: Acta Path. Jap., 1960, 10, 35.
82. SOLOMON, C., LIGHT, A. E., AND DEBEER, E. J.: Arch. Ophthal., 1955, 54, 850.
83. SALLMANN, L. VON: Amer. J. Ophthal., 1957, 44, 159.
84. LIGHT, A. E., SOLOMON, C., AND DEBEER, E. J.: J. Nutr. 1956, 60, 157.
85. PODAS, S. M., AND CANDLOS, G. P.: Amer. J. Ophthal., 1969, 68, 500.
86. DJALDETTI, M., PINHAS, J., DEVRIES, A., KATT, E., JOSHUA, H., AND DOLLBERG, L.: Blood, 1968, 32, 336.
87. RIEDER, H.: Seventh Eur. Congr. Haematology, (London), 1959, Abstract No. 96.
88. Toxic effects of busulphan, Lancet, (April 20) 1968, 1, 854.
89. EPSTEIN, E., AND MACEACHERN, K.: Arch. Intern. Med., 1937, 60, 867.
90. GOLDHAMER, S. M., AND BARNEY, B. F.: J.A.M.A., 1936, 107, 1041.
91. HEARD, B. E.: J. Path. Bact., 1962, 88, 159.
92. DONIACH, I., MORRISON, B., AND STEINER, R. E.: Brit. Heart J., 1954, 16, 101.
93. POWERS, E. L., AND POMEROY, J. H.: Ann. N. Y. Acad. Sci., 1958, 68, 702.
94. VOGEL, C. L., COHEN, M. H., POWELL, R. D., JR., AND DEVITA, V. T.: Ann. Intern. Med., 1968, 68, 97.
95. DEVITA, V. T., EMMER, M., LEVINE, A., JACOBS, B., AND BERARD, C.: New Eng. J. Med., No. 6, 1969, 280, 287.
96. GOODELL, B., JACOBS, J. B., POWELL, R. D., AND DEVITA, V. T.: Ann. Intern. Med., 1970, 72, 337.

# Disseminated Herpes Zoster: Treatment with Cytosine Arabinoside

BARBARA A. NEILAN, M.D.* AND
GERALDINE P. SCHECHTER, M.D.†

HERPES ZOSTER OCCURS VERY COMMONLY as a complication of lymphoma, and in this combination the disease has a high morbidity and mortality due mainly to its tendency to disseminate. This report concerns the effectiveness of cytosine arabinoside, an agent that interferes with DNA synthesis in the therapy of disseminated herpes zoster.

## Report of Case

The patient was first seen in 1952 at the age of 25 with left cervical adenopathy. The diagnosis of Hodgkin's disease was made by lymph-node biopsy, and a left radical neck dissection was performed. He was well until 1967 when lymphadenopathy recurred in the left cervical region and 4000 R was given in the mantle distribution. In January 1970 splenomegaly was noted and a splenectomy was done. The spleen and liver were found to be involved with Hodgkin's disease. He was then given 6 courses of combined chemotherapy with nitrogen mustard, Vincristine, Procarbazine, and Prednisone from 2/5/70 to 7/9/70. Following this he did well clinically, although his alkaline phosphatase was 19 King-Armstrong units and his differential white blood cell counts revealed a monocytosis of 30%. Eight months after completion of chemotherapy he developed herpes zoster involving the right T4-5 dermatomes. Six days later he noted vesicular lesions on his face and neck and was hospitalized. At the time of admission his temperature was 100.8° F, and zosteriform lesions were present on his face, neck, trunk, and extremities. No significant lymphadenopathy or hepatomegaly were noted.

The hematocrit was 42%, the white blood cell count was 4900, and the platelets were adequate on smear. A biopsy of one of the lesions revealed intra-epidermal vesicle formation with multinucleated balloon cells. Intranuclear and some intracytoplasmic inclusion bodies were present (Fig. 1). Viral cultures of the vesicle fluid, throat, and feces were negative. The complement fixation antibody titer drawn on the first day of dissemination was negative. However, a convalescent titer drawn 3 months later was positive to the 1 : 32 dilution, which in light of the previously negative titer was thought to be indicative of recent herpes zoster infection. Serum protein electrophoresis revealed a gamma globulin of 0.4g%.

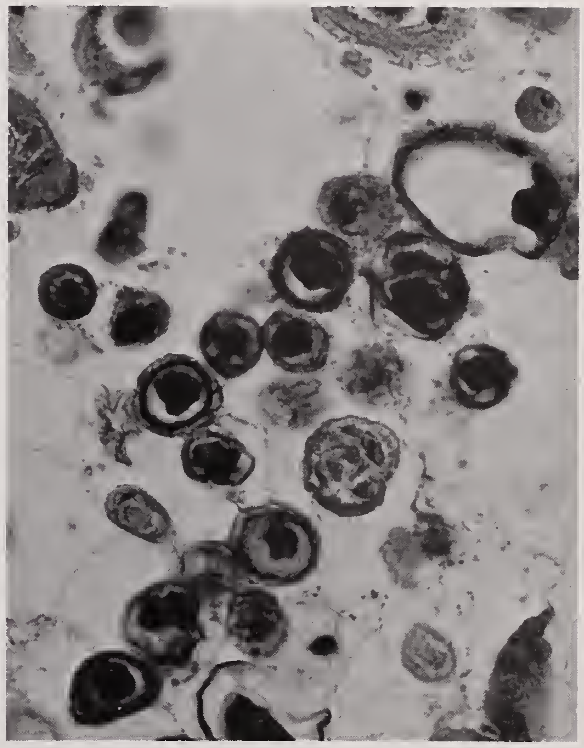


FIG. 1. Histologic section of intra-epidermal vesicle demonstrating intranuclear inclusion bodies.

The hospital course is summarized in figure 2. The initial dosage of cytosine arabinoside was 20 $mg/m^2$ administered as an I.V. bolus followed by 80 $mg/m^2$ I.V. infusion over 4 hours. However, when new skin lesions were noted on the 3rd day the cytosine was changed to 100 $mg/m^2$ administered as a continuous 24 hr. I.V. infusion. As can be seen in figure 2 the white blood cell count dropped to 3700 on the 7th day of hospitalization.

On the 4th day of treatment the patient was feeling much better, the temperature was down to 100° F, and no new skin lesions were present. He continued to improve and at the time of discharge, 16 days after admission the generalized skin lesions had healed. The primary skin lesions involving the T4-5

---

* Senior Fellow, Hematology Research Section, Veterans Administration Hospital, Washington, D.C.

† Staff Physician, Hematology Research Section, Veterans Administration Hospital, Washington, D.C.

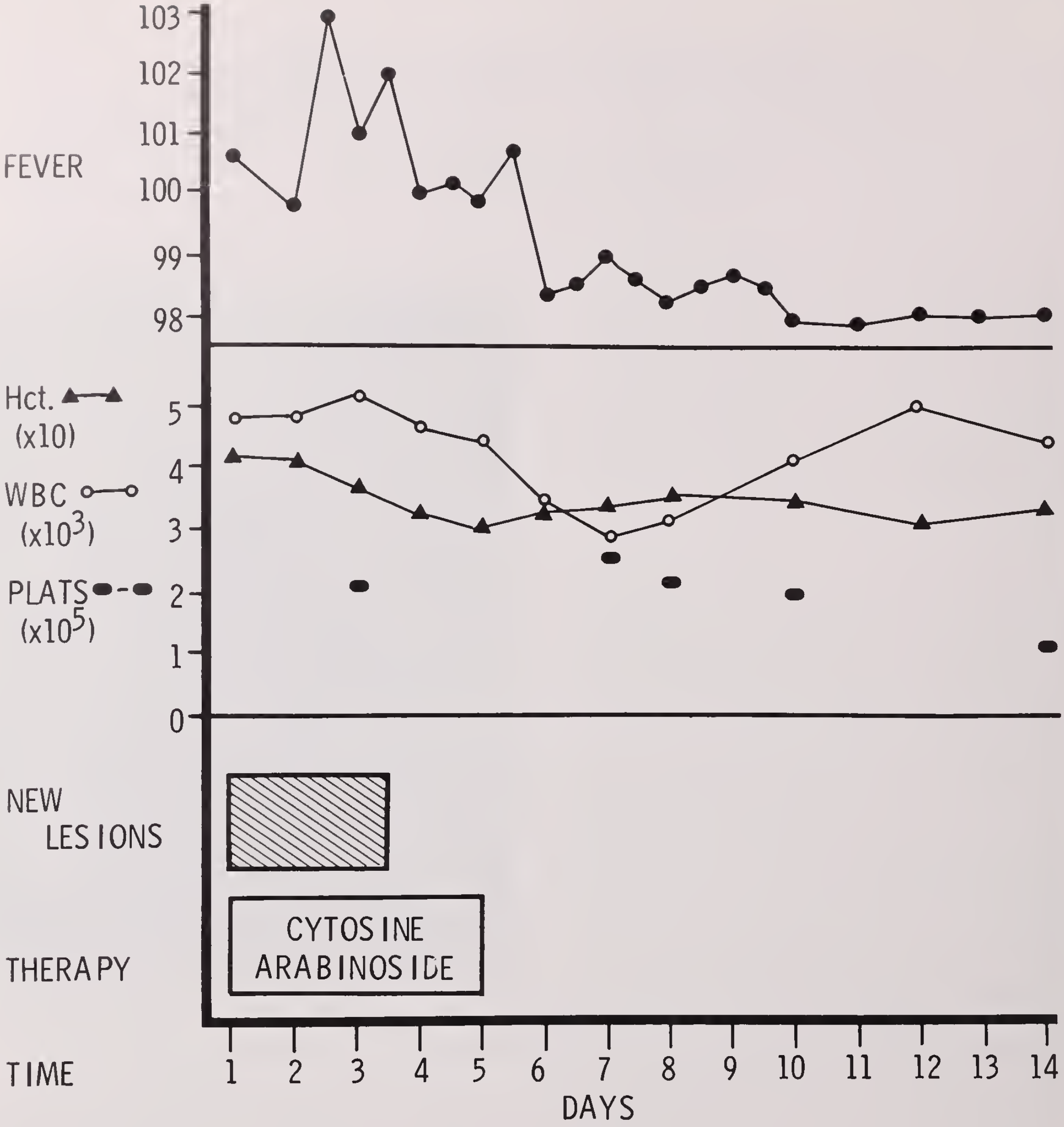


FIG. 2. Clinical chart summarizing hospital course.

dermatomes did not completely heal until 9 weeks. He is now 4 months post-infection and has no evidence of recurrence of Hodgkin's disease.

### Discussion

Herpes zoster has been observed frequently in association with lymphomas, myeloma, and chronic leukemias. The significance of this association is evident from several large series of patients with hematologic neoplasms in which the incidence of herpes zoster was found to be 8-9%[2-4] as compared to the low values of 0.22% to 1.15% reported in other groups.[2,5]

Disseminated herpes zoster has been found more often in patients with neoplastic disease. In a series of patients seen in dermatology, ophthalmology, and pediatric departments the incidence of disseminated disease was 2%,[6] whereas, in 48 patients with herpes zoster and Hodgkin's disease, dissemination was observed in 27%.[7]

Disseminated herpes zoster is a generalized vesicular eruption involving the face, neck, trunk, and extremities, with systemic symptoms of malaise, nausea, headache, and fever. The course of the disseminated form of herpes zoster has been reported to be quite variable. In 3 patients without underlying disease the generalized vesicles appeared over a

48-hour period and cleared in 2 weeks in 2, whereas in the third they appeared over 7 days and cleared in 5 weeks.[6] When the disseminated infection occurred in association with underlying disease the morbidity and mortality were greater than in other patients.[7,11]

The high incidence of herpes zoster, localized and disseminated, in patients with Hodgkin's disease is believed to be due to an impairment in their immune mechanisms. Many factors have been investigated in an attempt to define this defect, but the answer is still not known. The hypogammaglobulinemia noted in our patient and seen not infrequently in patients with malignant lymphoma suggests the importance of a humoral defect in susceptibility to herpes zoster. Two patients with generalized zoster and malignancy in whom antibody titers were measured were found to have a delayed antibody response.[8] However, 2 patients with generalized zoster without neoplasia had normal antibody responses.[8] This difference seemed to indicate that more than humoral mechanisms were involved in the immunologic defect. A high percentage of patients with Hodgkin's disease who develop herpes zoster are in advanced stages of the disease and have impaired delayed hypersensitivity,[7] suggesting that cellular immunity is important in herpes zoster as in other viral infections.

Further support of the importance of cellular immunity has been recently obtained from measurement of cutaneous interferon production in Hodgkin's patients and normal individuals infected with varicella.[9] It was apparent from the data obtained that high vesicle-fluid interferon levels correlated well with cessation of new lesions. Normal subjects with localized herpes zoster were found to have high vesicle-fluid interferon levels. In contrast, 3 patients with neoplastic diseases who developed disseminated zoster had low cutaneous interferon levels in early vesicles. These results suggested that adequate interferon production was a factor in preventing dissemination of herpes zoster.

Other factors have been studied to explain the increased incidence of herpes zoster in Hodgkin's disease. The effect of chemotherapy, steroids, and radiation has been felt to be detrimental to host resistance to varicella-zoster infection. In 13 Hodgkin's patients with dissemination 73% had received treatment for Hodgkin's disease during the 2 months prior to infection.[7]

The question of reactivation of latent virus versus reinfection has not yet been answered. An epidemiologic investigation of 108 patients with herpes zoster suggested that the infection was due to an activation of latent virus rather than reinfection.[8] Recently, however, in a group of patients with Hodgkin's disease exposed to varicella-zoster 26% developed herpes infection 25 to 30 days after exposure.[10]

Different forms of therapy have been used for disseminated zoster, all with variable clinical response. Large doses of pooled human gamma globulin in 3 patients failed to alter their course, whereas in 5 patients improvement was noted soon after the gamma globulin administration.[7] Attempts to find a consistently effective treatment led to the investigation of antiviral agents. 5-iodo-2-desoxyuridine (IUDR) was used in a patient with disseminated herpes zoster with cessation of new lesions 24 hours after institution of treatment.[12] The systemic use of IUDR has been associated, however, with marked toxicity to the bone marrow and liver.

Cytosine arabinoside, an agent which inhibits DNA synthesis, has recently been tried in the treatment of generalized zoster. Cytosine arabinoside (1-B-D-arabinofuranosylcytosine hydrochloride) is a synthetic pyrimidine nucleoside which contains arabinoside substituted for ribose as the abnormal moiety. The proposed mechanism of interference with DNA synthesis is inhibition of the reduction of cytidylic acid to 2′ deoxycytidylic acid.[13]

Cytosine arabinoside has been found to be active *in vitro* against varicella, a DNA virus.[14] The drug's effectiveness against vaccinia virus in experimental rabbit-eye infections has also been shown,[15] and it has been used now in several patients with disseminated herpes zoster.[16-18] In 8 patients with generalized zoster in association with an underlying disease the use of cytosine arabinoside was followed by dramatic responses within 1-4 days of treatment in all but 1 patient who died of varicella penumonia 36 hours after treatment was started.[19]

The primary toxicity of cytosine arabinoside is bone-marrow suppression which is mainly seen as leukopenia and thrombocytopenia. Following the administration of 100 mg/m$^2$ the white blood cell count has been shown to follow a biphasic course with an initial fall within 24 hours followed by recovery in 7-9 days, and then a second drop between the 15th and 24th day.[20] The nadir of the platelet count occurs between days 12 and 15 with recovery to above 100,000 within 48 hours. The per cent of reticulocytes decreases rapidly and completely disappears by the fifth day. Bone marrow specimens obtained within 24 hours showed megaloblastic changes. No hepatic or renal toxicities have been noted with this method of administration.

It is difficult to assess the role that therapy played in our patient's recovery, since the course of generalized zoster is quite variable. However, in 10 patients with dissemination new skin lesions continued to appear over several days,[7] whereas no new vesicles appeared in our patient's case after the third day of therapy. Also, prolonged problems with healing of the skin and post-herpetic neuralgia have been reported to be higher in patients with Hodgkin's disease,[17] and these problems did not occur in our patient.

## Summary

Administration of cytosine arabinoside, a chemotherapeutic agent with activity against DNA viruses, resulted in prompt recovery in a patient with disseminated herpes zoster complicating Hodgkin's disease. This agent appears to be the most effective treatment to date for this serious disease.

## Acknowledgements

The authors acknowledge the contributions of Dr. B. Fischmann in obtaining the skin biopsy, of Dr. N. Saini for interpreting the biopsy, and of Dr. S. Siegel for the viral cultures and antibody titers.

## References

1. DEVITA, V. T., SERPICK, A. A., AND CARBONE, P. P.: Ann. Intern. Med. 1970, 73, 881.
2. WRIGHT, E. T., and WINER, L. H.: Arch. Derm., 1961, 84, 242.
3. BICHEL, J., AND THORLING, K.: Danish Med. Bull., 1967, 14, 68.
4. SHANBROM, E., MILLER, S., HOAR, H.: Ann. Intern. Med., 1960, 53, 523.
5. HELLGREN, L. AND HERSLE, K.: Geront. Clin., 1966, 8, 70.
6. BURGOON, C. E., BURGOON, J. S., and DOUGLAS, G.: J.A.M.A., 1957, 164, 265.
7. SOKAL, J. E., AND FIRAT, D.: Amer. J. Med., 1965, 39, 452.
8. MILLER, L. H., BRUNELL, P. A.: Amer. J. Med., 1970, 49, 480.
9. ARMSTRONG, R. W., GURWITH, M. J., WADDELL, D., AND MERIGAN, T. C.: New Eng. J. Med., 1970, 283, 1182.
10. SCHIMPFF, S., AND OTHERS: Ann. Intern. Med., 1971, 74, 837.
11. MERSELIS, J. G., KAYE, D., HOOK, E.: Arch. Intern. Med., 1964, 113, 679.
12. WALTUCH, G., AND SACHS, F.: Arch Intern. Med., 198, 121, 458.
13. CHU, M. Y., AND FISHER, G. A.: Biochem. Pharmacol., 1962, 11, 423.
14. SELIGMAN, B., AND ROSNER, F.: Lancet, 1970, 1, 307.
15. UNDERWOOD, G. E., WISNER, C., AND WEED, S.: Arch. Ophthal., 1964, 72, 505.
16. HALL, T. C., AND OTHERS: Trans. Ass. Amer. Physicians, 1969, 82, 201.
17. PRAGER, D., BRUDER, M., SAWITSKY, A.: J. Pediat., 1971, 78, 321.
18. MCKELVEY, E. M., AND KWAAN, H. C.: Blood, 1969, 34, 706.
19. HALL, T., AND OTHERS: Clin. Res., 1969, 17, 470.
20. BURKE, P. J., SERPICK, A. A., CARBONE, P. P., AND TARR, N.: Cancer Res., 1968, 28, 274.

# Neuropacemaker for Relief of Intractable Pain

JOHN L. FOX, M.D.*

IN 1965 MELZACK AND WALL[1] published their now well-known 'gate control' theory of pain. Their theory, which supplements the earlier specificity theory and pattern theory, emphasizes a pain-inhibition system effected by the large, fast-conducting sensory-nerve fibers. These fibers tend to inhibit the smaller, more slowly conducting sensory nerve-fibers believed to carry impulses capable of transmission to a pain recognition center in the brain. Melzack and Wall included the substantia gelatinosa in the spinal cord as one of the principal sites of this inhibitory phenomenon where, under normal circumstances, the fast-conducting sensory-nerve fibers keep the synaptic gate relatively closed. This prevents non-noxious stimuli from traveling up the contralateral spinothalmic tract and perceived as pain.

On the basis of such an attractive, but as yet unproven, theory, Shealy et al[2-4] and Sweet et al[5-9] have implanted devices which electrically stimulate pain-inhibition systems.

The following describes our preliminary experience with stimulation of the dorsal columns of the spinal cord for relief of intractable pain. Experience with 7 patients at the Veterans Administration Hospital and the George Washington University Hospital is reviewed.

## Method

The neuropacemaker (NPM) consists of 4 basic parts: the transmitter with its antenna external to the body and the receiver with its dorsal column electrode internally located. With the patient under general anesthesia the electrode is placed over the surface of the dorsal column through a single-level laminectomy. It is placed in the subdural space so as to lie on 1 or both dorsal columns (Fig. 1). The exact level will depend on the pain location (e.g., about T-12 bilaterally for pelvic pain; about T-8 unilaterally for unilateral leg pain; higher levels for pain located more cephalad). The dura and fascia are closed tightly. The wire lead (insulated with silicone rubber compound) is passed subcutaneously either over the shoulder or around the chest wall and connected with the receiver.

The receiver (Fig. 2) lies in a subcutaneous pocket above the breast. It also is coated with silicone rubber.

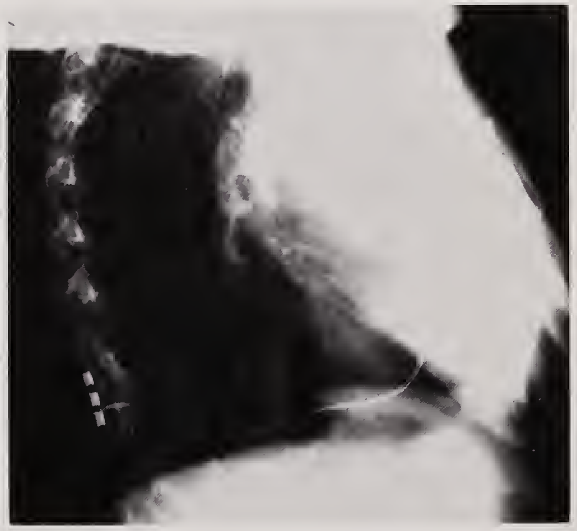


FIG. 1. Lateral view of Medtronics dorsal column electrodes overlying the thoracic spinal cord. The leads pass subcutaneously to the anterior chest wall. Rheumatoid spondylitis is also noted.

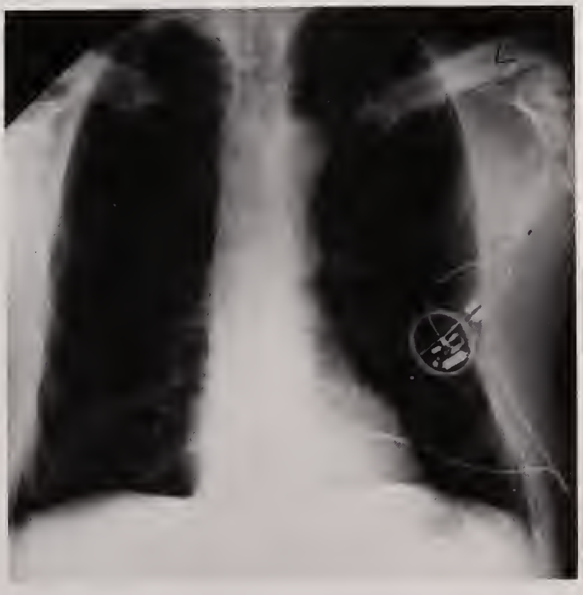


FIG. 2. This chest X-ray film shows the subcutaneous Medtronics receiver implanted above the breast.

---

* Chief of Neurosurgery, Veterans Administration Hospital, Washington, D.C. 20422; Associate Professor of Neurological Surgery, George Washington University Medical Center, 2150 Pennsylvania Avenue, N.W., Washington, D.C. 20037

After the patient has recovered from the operation he is given the transmitter and antenna along with instructions in its use. The dimensions of the transmitter are about 1 X 2 X 3 inches. It is carried conveniently by the patient on his belt or in his pocket. A wirelead runs from the transmitter to the 2-inch diameter flat antenna taped on the skin overlying the subcutaneous receiver.

On the transmitter are 2 dials: voltage and frequency. The patient uses that specific frequency (10 to 600 pulses per second where each pulse is 0.4 msec. long) which best relieves his pain. He turns the voltage up (usually about 0.5 volt) until he just barely feels a not unpleasant tingling or buzzing sensation in the region of the pain. The electrical energy from the transmitter and antenna is converted by the receiver from radiofrequency energy to pulses of electrical current capable of stimulating the dorsal columns at the proper pulses per second. There is no direct contact between the external antenna and the internal receiver.

## Results

Of the 9 patients in whom we have implanted a NPM as described, 4 obtained good relief of their pain and 5 did not get relief. The 4 good results included the following. One was a man with intractable right-leg pain secondary to an old sciatic nerve injury. He uses his NPM about 5 times a day for 10 minutes. The second patient had lumbar arachnoiditis. The NPM has satisfactorily relieved her pain. She uses it continuously. The third patient suffered from chronic stump neuralgia as well as phantom pain following a left above-knee amputation for vascular insufficiency. She uses the NPM for 10 minutes 6 times per day. While her phantom pain has responded poorly, her stump neuralgia is completely controlled. The fourth patient had metastatic lung cancer to the spine.

The 5 patients not relieved of pain include 1 with burning pain in his feet (etiology unknown but subsequent to rheumatoid spondylitis and a cervical fracture), a man with a left footdrop and foot pain (etiology unclear; NPM later removed), a woman with pelvic pain from carcinoma of the rectum, a man with sacral pain from metastatic gastric cancer, and a paraplegic patient.

In this series there were no significant complications.

## Discussion

This series of 9 patients is too small to gain any definite conclusions, and a longer followup is needed to clarify the place of this NPM in the treatment of pain. The preliminary pooled results of 160 cases of NPM implantation over the dorsal columns for various types of intractable pain seem to indicate that case selection is important.[8] The results are good in about 80% of patients passing a preliminary psychiatric evaluation (including the Minnesota Multiphasic Personality Inventory or MMPI test). Those whose tests indicate their pain may be related largely to psychiatric problems in addition to possible organic causes seem to have only a 15% good result rate. As time improves, the evaluation of these results may change.

It has become apparent that in order for reasonable pain-relief to be effected, the sensation felt by the patient (a buzzing, tingling or vibration) during stimulation must include the general region of the pain. Thus, as electrode placement becomes more accurate, the results will improve.

It is an interesting phenomenon that each patient who experiences pain-relief does so at a rather specific and reproducible frequency of stimulation (10 to 600 pulses per second, usually 50 to 100 pulses per second). The frequency for 1 patient will not necessarily be the same as that for another. Rarely the frequency for the same patient will vary from day to day. Some patients get many hours of relief after only several minutes of stimulation and some require continual stimulation.

One of the advantages of this procedure is the fact that it is a non-destructive type method of relief of intractable pain. If it does not work, there still has, been no deliberate injury to the nervous system. For this reason it most likely will be preferable to the use of cordotomy in cases of benign pain etiology. In cases with unilateral intractable pain from cancer, selective rhizotomy or percutaneous cordotomy remains the surgical treatment of choice.

## Summary

Nine patients with intractable pain from cancerous and benign causes had implantation of a neuropacemaker (NPM) over the dorsal columns of the spinal cord. Pain-relief was obtained in 4 who selectively stimulate a pain-inhibition system by using a convenient radiofrequency transmitter. Case selection is important in improving the results of this non-destructive technique of dorsal-column stimulation. This area of investigation in electrical stimulation of the nervous system has opened up a new frontier in the clinical treatment of intractable pain and possible other disease states such as certain forms of mental illness and central nervous-system dysfunction.

## References

1. MELZACK, R., AND WALL, P. D.: Science, 1965, 150, 971.
2. SHEALY, C. N., MORTIMER, J. T., AND RESWICK, J. B.: Anesth. Analg., 1967, 46, 489.
3. MORTIMER, J. T., SHEALY, C. N., AND WHEELER, C.: J. Neurosurg., 1970, 32, 553.
4. SHEALY, C. N., MORTIMER, J. T., AND HAGFORS, N. R.: J. Neurosurg., 1970, 32, 560.
5. WALL, P. D., AND SWEET, W. H.: Science, 1967, 155, 108.
6. SWEET, W. H., AND WEPSIC, J. G.: Trans. Amer. Neurol. Ass., 1968, 93, 103.
7. WHITE, J. C., AND SWEET, W. H.: Pain and the Neurosurgeon. A Forty-Year Experience. J. C. WHITE AND W. H. SWEET, editors. Springfield, Illinois: Charles C Thomas, Publishers, 1969, p. 888.
8. SHEALY, C. N.: Electrical stimulation of neural structures for the suppression of pain. A preliminary report at the American Association of Neurological Surgeons, Houston, Texas, April 18–21, 1971.

# Recent Therapeutic Developments in Lung Cancer*

HEINE H. HANSEN, M.D.† AND OLEG S. SELAWRY, M.D.‡

THE INCIDENCE OF BRONCHOGENIC CARCINOMA has increased more than 5-fold during the past 3 decades, disproportional to all other malignancies. It is now the most common form of carcinoma in males in this country, and 65,000 persons are expected to succumb to it in the U. S. this year. In spite of much publicity on the relationship of cigarette smoking to lung cancer, complete prevention of this disease appears unlikely for years.

Surgery remains the mainstay of treatment for bronchogenic carcinoma. Unfortunately, less than one-fourth of all patients are eligible for curative resection at the time of diagnosis.[1] Of this group, the 5-year survival rate varies between 20 to 30%, indicating an overall 5-year survival rate of 8 to 10%, a relatively constant figure reported by a number of investigators.[2,3] This percentage has not changed significantly during the last decade in spite of improved pre-operative screening tests, including mediastinoscopy and more sophisticated technical operative procedures resulting in decrease of postoperative mortality. Bronchogenic carcinoma when first diagnosed is late in its natural evolution, with the majority of patients having seeding of neoplastic cells outside the primary lesion. In order to improve the present dismal results of treatment of lung cancer, it appears that major progress can be achieved by earlier detection, such as frequent mass-screening procedures, including pulmonary cytopathologic examinations in high-risk population, similar to the tests for cancer of the cervix. Until then, other modalities of nonsurgical treatment must be explored, as discussed in this Journal by Shnider and Zevallos in 1966.[4] It is the purpose of this paper to review recent developments in this area, including a short presentation of current research undertaken by the NCI-VA Medical Oncology Service at the Washington, D. C. Veterans Administration Hospital. Only a select number of larger trials will be considered.

Studies in which microscopic subclassification of lung cancer are applied will be emphasized because each major subgroup differs in its natural history and metastatic potential. The former was documented by the Veterans Administration Lung Group,[5] demonstrating that the survival in patients with unresectable carcinoma of the bronchus in a placebo group was 3.0, 2.0, 1.8, and 2.8 months for squamous-cell, undifferentiated large-cell, small-cell, and adenocarcinoma, respectively. The last has been shown not only in autopsy material[6] but in clinical staging procedures. For example, bone-marrow examination performed at this institution reveals positive findings in 45% of all unresectable, previously non-treated patients with small oat-cell carcinoma versus less than 10% in patients with other cell types.[7,8] This difference in relation to cell type must be taken into consideration in any analysis and comparison of the many reports published yearly. It would be optimal if a uniform cell-type classification such as the World Health Organization classification[9] would be adopted by all investigators in this field.

The necessity for proper classification can be noted in a recent study of the Medical Research Council of Great Britain.[10] While surgical resection, as previously mentioned, is basically the treatment of choice for bronchogenic carcinoma, it was demonstrated in this study that radiotherapy was superior to surgery as a single modality of treatment in patients with small-cell carcinoma. The study was conducted as a randomized trial including 144 patients, all diagnosed pre-operatively on bronchial biopsy and all thought likely to be operable. The mean survival for the irradiated group was 265 days versus 190 days for the surgically treated group, a statistically significant difference. Furthermore, the 4 5-year survivors had received radiotherapy. Thus the participating surgeons and radiotherapists concluded that radio-therapy is superior to surgery for treatment of operable small-cell bronchogenic carcinoma.

---

[*] From the NCI-VA Medical Oncology Service, Medicine Branch, National Cancer Institute, and Department of Medicine, Veterans Administration Hospital, Washington, D.C. 20005.

[†] Cancer Research Internist, NCI-VA Medical Oncology Service, Medicine Branch, National Cancer Institute, and Department of Medicine, Veterans Administration Hospital, Washington, D.C.; Assistant Professor of Medicine, George Washington University School of Medicine, Washington, D.C.

[‡] Chief, NCI-VA Medical Oncology Service, Medicine Branch, National Cancer Institute, and Department of Medicine, Veterans Administration Hospital, Washington, D.C.; Associate Professor of Medicine, George Washington University School of Medicine, Washington, D.C.

Address reprint requests to Heine H. Hansen, M.D., NCI-VA Medical Oncology Service, Veterans Administration Hospital, 50 Irving Street, N.W., Washington, D.C. 20422.

In the area of treatment combining surgery and chemotherapy, studies have been continued by both the Veterans Administration Surgical Adjuvant Group[11] and the University Surgical Adjuvant Group[12] administering alkylating agents such as cyclophosphamide or mechlorethamine in short courses postoperatively. These studies have all had negative results. The latter group, furthermore, showed that there was no influence of mechlorethamine in the different cell types or tumor size when those were examined separately. Of interest, however, was the finding that both those factors appeared to change the survival rate in all the patients in the trial, demonstrating the necessity for control groups.

On the other hand, the Veterans Administration Lung Group has recently indicated that a marked difference in response between cell types might exist.[5] The trial showed that when alkylating agents were compared with an inert compound, both intravenous cyclophosphamide and mechlorethamine had a favorable influence on survival. However, when morphologic subgroups were analyzed, the significant prolongation of survival on cyclophosphamide was predominantly based on superior response of patients with small-cell carcinoma. In contrast, mechlorethamine was associated with a 2.5-month increase in survival in squamous-cell carcinoma. A difference in objective response rate to antineoplastic agents as related to cell type is also evident in a review of a number of single agents.[13] Small-cell carcinoma has been shown to be especially sensitive to a number of compounds including alkylating agents, methotrexate, procarbazine, 1,3-bis-(chlorethyl)-l-nitrosourea (BCNU), and vincristine (response rates ⩾50%).

On the basis of an extensive review of the literature, a feasibility study was conducted by the NCI-VA Medical Oncology Service, Veterans Administration Hospital, Washington, D.C.[14] Combination chemotherapy formed the nucleus of the study and was based on 1) unimpressive effects of single agents with prolongation of survival as parameter,[13] 2) superiority of combination of drugs over single agents in other malignancies such as acute lymphocytic leukemia, Hodgkin's disease, and breast cancer, 3) superiority of combination chemotherapy in representative animal solid tumor models,[15] and 4) suggestive superiority in lung cancer of combination chemotherapy over single agents, as observed recently by a number of European investigators in uncontrolled studies.[16–19] In this study 46 consecutive untreated patients with carcinoma of the lung were evaluated from May, 1969 to July, 1970. All were staged before treatment. The staging procedures included radiographic bone survey, bone-marrow examination, and, in the majority of patients, also bone and liver scans. Patients with the primary tumor limited to one hemithorax including ipsilateral supraclavicular lymph nodes received, in addition, intensive radiotherapy (5000 R in 6 weeks) starting 3 weeks after institution of chemotherapy.

Chemotherapy consisted of a cell-cycle stage-sensitive drug acting only on actively proliferating cells, and a cell-cycle stage-nonsensitive drug with the initial combination being cyclophosphamide and methotrexate. It was followed by dactinomycin, a potentially radiosensitizing agent, and vincristine, corresponding to the period of radiotherapy in the localized group. This combination of agents had produced objective responses in 6 of 10 patients with bronchogenic carcinoma.[20] Then cyclophosphamide and methotrexate were resumed and maintained until the disease progressed. When this occurred the treatment was changed to hydroxyurea and 1,-(2-chlorethyl) 3-cyclohexyl-1-nitrosourea (CCNU), an orally administered nitrosourea with increased penetration of the blood-brain barrier as compared to BCNU, lack of cross-resistance with alkylating agents, and superiority over BCNU in a number of animal tumors.[21] All of the chemotherapeutic doses in the trial were adjusted to individual tolerance.

Only 2 patients had to be disqualified for inability to follow therapy. A detailed analysis of the study will be presented elsewhere. However, at present the median survival for patients with localized disease is 13 months, with 12/26 patients still alive. These results, compared with historical data from the Veterans Administration Lung Group is very encouraging and indicates a 100% improvement in survival, almost comparable with the group of patients with lung cancer undergoing resectable surgery. The results are particularly impressive for patients with adenocarcinoma in which 5/5 patients are alive more than 1 year after initiation of treatment, in contrast to squamous-cell carcinoma, in which only 1/9 patients are still living.

The median survival for patients with extensive disease is 4½ months, with 2/18 still living. Also worth mentioning is the objective response rate of 100% to the combined treatment of 8 patients with small-cell carcinoma, indicating the marked tumor sensitivity of this particular tumor cell-type to anti-neoplastic treatment. In addition, the trial demonstrates a significant difference at the 0.05 level between objective responders and non-responders, the survival in days being 350 and 130 days, respectively.

Obviously, caution must be taken in the interpretation of data from a feasibility study in a single institution. However, because of these results the principles of this study are now being tested in a controlled trial in cooperation with several other institutions, including untreated, inoperable patients with bronchogenic carcinoma.

## Summary

The current literature since 1966 on the treatment of bronchogenic carcinoma has been discussed. A feasibility study conducted by the National Cancer Institute-Veterans Administration Medical Oncology Service at the Washington, D.C. Veterans Administration Hospital using combination chemotherapy and radiotherapy including 46 patients with bronchogenic carcinoma has been presented. The results in patients with adenocarcinoma and small-cell carcinoma were sufficiently encouraging to initiate a controlled clinical trial, now in progress.

## Acknowledgement

We are indebted to Dr. R. J. Andrews, Head of the Radiotherapy Division, V.A. Hospital for active participation in the feasibility study.

## References

1. HIGGINS, G. A., LAWTON, R., HEILBRUNN, A., ET AL: Ann. Thorac. Surg., 1969, 7, 472.
2. LINCE, L., AND LULU, D. J.; Arch. Surg., 1971, 102, 103.
3. WEISS, W.: Arch. Environ. Health, 1971, 22, 168.
4. SHNIDER, B. I., AND ZEVALLOS, P.: Med. Ann. D. C., 1968, 35, 528.
5. GREEN, R. A., HUMPHREY, E., CLOSE, H., ET AL: Amer. J. Med., 1969, 46, 516.
6. WATSON, W. L.: Lung Cancer, St. Louis, C. V. Mosby Co., 1968, p. 507.
7. HANSEN, H. H., AND MUGGIA, F. M.: New Eng. J. Med., 1971, 284, 962.
8. HANSEN, H. H.: Unpublished data.
9. KREYBERG, L.: International Histological Classification of Tumors, No. 1, World Health Organization, Geneva, 1967.
10. MILLER, A. B., FOX, W., AND TALL, R.: Lancet, 1969, 2, 501.
11. HIGGINS, G. A., HUMPHREY, E. W., HUGHES, F. A., ET AL: J. Surg. Oncology, 1969, I, 221.
12. SLACK, N. H. (University Surgical Adjuvant Lung Project): Cancer, 1970, 25, 987.
13. CARBONE, P. P., FROST, J. K., FEINSTEIN, A. R., ET AL: Ann. Intern. Med., 1970, 73, 1003.
14. HANSEN, H. H., SELAWRY, O. S., AND ANDREWS, J. R.: Proc. Amer. Ass. Cancer Res., 1971, 12, 50.
15. SCHABEL, F. M.: Cancer Res., 1969, 29, 2384.
16. ALBERTO, P., BRUNNER, K., MARTZ, G., ET AL: X International Cancer Congress, Houston, Medical Arts Publishing Co., 1970, 469.
17. MANNES, P., DERRIKS, R., MORRIS, R., ET AL: X International Cancer Congress, Houston, Medical Arts Publishing Co., 1970, 450.
18. ISRAEL, L., DEPIERRE, A., AND CHAHINIAN, P.: Cancer, 1971, 27, 1089.
19. HOVE, W. V., AND STRACHTEN, M. V. D.: Acta Clin. Belg., 1969, 21, 272.
20. CHANES, R. E., AND BOTTOMLEY, R. H.: Proc. Amer. Ass. Cancer Res., 1968, 9, 12.
21. HANSEN, H. H., SELAWRY, O. S., MUGGIA, F. M., ET AL: Cancer Res., 1971, 31, 223.

# Cold . . . Man's Assiduous Remedy

ALFRED R. HENDERSON, M.D.*

*". . . entreat the north*
*To make his bleak winds kiss my parched lips*
*And comfort me with cold. I do not ask you much,*
*I beg cold comfort: and you are so strait*
*And so ingrateful, you deny me that."*
*Shakespeare: King John, V: 39.*

ALMOST 30 YEARS AGO Lawrence Smith stated: "Scientific specific bio- and chemotherapy have largely replaced the placebos, superstitions and nostrums of the past generations, yet the hot-water bottle and the ice-bag yield not one iota of their importance in our present-day therapeutic armamentarium."[1] Smith was then presenting to the American College of Physicians the fruitful lessons of almost a decade of painstaking and tenable labor that had culminated in the first purposeful and scientific breaking of the thermal barrier in man, now referred to as induced hypothermia. This important work, mainly the endeavor of Temple Fay, fell victim to the disruptive sequel of the coming of World War II and its relegation to that vast boneyard of medicine's past, where exists entombed in the failing memories of a few old men, and in dust-gathering volumes in library archives, some of medicine's greatest unprized events.[2]

Fay, with the backing of his imperturbable convictions, threw out the torch which remains to be claimed by succeeding generations of physicians, little interested in their professional historical record. His words, written long ago, are nevertheless true: ". . . this [hypothermia] is one of the most fertile fields of research yet opened to modern medicine."[3]

Man's first remedies were doubtless the simple elements easily within reach and requiring little or no modification. Heat, sunlight, water and air at all tolerable temperatures represent his earliest defenses against disease and symptoms. He soon must have discovered the pain-relieving qualities of cold water and ice. It would seem logical (but, therefore, against human tradition) that so effectual an agent as cold, so readily available, so inexpensive and easily applied, should have quickly attained a prominent position in therapeutics and be perpetuated and refined as an indispensable medical utility through the ages. This was not the case, of course, and hypothermia has been given the cold shoulder, with very few exceptions, by the smug practitioners of every generation.

### Ancient Uses of Cold Therapy

In the light of what has just been said it is not surprising to find in the most ancient medical text known, the Edwin Smith Papyrus, dated about 3500 B.C., numerous references to the use of cold as therapy.[4] In a tone that would make contemporary neurosurgeons feel dignified by such determinative backing, the ancient practitioners ordered cold applications for wounds of the head.

Of even greater interest, perhaps, was the use of local cold and cooling materials for infected and ulcerated breasts. If some of these cases were instances of malignancy, the very favorable responses reported may well represent the first written account of the utilization of hypothermia for cancer of the breast, antedating James Arnott's 'breast-freezing' experiences of the mid-1800's, and Temple Fay's cases in the 1930's by over 5 millenia.[5,6].

What might be surprising to many is the fact that in ancient times, and in relatively warm latitudes, the making of artificial ice and the cooling of liquids had reached a fair state of technological accomplishment.[7] Indeed, Pliny wrote of the physician Asclepiades, a fasionable physician of the Rome of Pompey, who frequently prescribed refrigerated wine and cold water for his patients and who, according to Marcus Varro, preferred to win for himself the surname of 'Cold Water Giver' (frigida danda).[8]

Four thousand years ago Homer reported on the use of cold-water dressings for open wounds.[9] During the seige of Troy, Patroculus, having been wounded by his friend, Eurypilus, dressed his incised limb with cold-water dressings after having removed the lance. The superiority of cold over narcotics has been readily appreciated by those who have used it through all ages.[1,3]

---

*Consultant, Division of Medical Sciences, Smithsonian Institution; Outpatient Services, Veterans Administration Hospital, Washington, D.C.

The Hippocratic school of medicine, with its zenith during the fourth and fifth centuries B.C. recognized the utility of cold for a variety of clinical disorders.[10] Cold affusions were used for gouty swellings, ice was applied to the shaved and injured head, and total body cooling was used for certain cases of tetanus, as a potent check against hemorrhage or anticipated hemorrhage, non-suppurative inflammations, non-ulcerative erysipelas, convulsions and for fractures and sprains attended with marked swelling and pain. Hippocratic contemporaries in India advocated the use of cold applications for hemorrhage also.[11]

During the first century A.D. Aretaeus of Cappadocian, advised that cold be applied to the chest for hemoptysis, as did the Hindus before him.[12] In addition, he advised the local application of cold for bleeding from any site and, specifically, for hemoptysis advocated cooling the lungs directly by the inhalation of cold air.

Aretaeus had two contemporary Roman colleagues who employed cold therapeutically and intensely. Celsus[13] plunged many a hot head beneath cold water for the "raving madness". This was done in much the same way as did Homer's Circe, who sought relief from her frightening night-dreams and prophetic extasies by immersing her head in cold water. Celsus' cold immersion therapy for the "slobbering fits" of hydrophobia was unequaled in its results, though neglected, until Pasteur. Celsus dunked his patients with a shocking abruptness into very cold water. In this manner he rid them of the possessing demon which feared water.

Aretaeus other medical contemporary was Antonius Musa. Formerly the physician of Julius Caesar, he was later the physician to Augustus and advisor to the poet Horace. It was Augustus' febrile illness that caused Musa to prescribe cold immersion treatment, and the beneficial result not only served Augustus, but the entire profession as well. In gratitude, the Emperor granted the income of physicians tax-free![14]

Although Laborit, of France, is given credit for the introduction of clinical hypothermia by means of 'lytic' drugs in our own era,[15] one must turn to the ancients for priority. The renowned Graeco-Roman anatomist, surgeon and clinician, Claudius Galen, during the second century, A.D., wrote profusely about medicines which bring about a 'refrigerant action' upon the systems and a cooling to the whole of the body. Galen also advocated cold affusions for tertian fever and boasted that, unlike his colleagues, he never lost a case if permitted to cool soon enough. He, as did Hippocrates, advised local cooling for erysipelas. It is undoubtedly true that Galen, his contemporaries and others for generations before him, did not depend upon the 'refrigerant' properties of medicinals to cool patients. Lucius Annaeus Seneca (1-65 A.D.) wrote of the collection and storage of snow from the mountains, as was carried out in all countries bordering the Mediterranean and in the Middle East. The snow as preserved by being hard-packed (stipare) into pits or trenches and covered with straw or chaff. The melting of the snow on top would form ice at the bottom, by virtue of the weight of the snow mass over it, thus making both snow and ice available.[16]

Far to the east, the equally famous Chinese surgeon, HUA TO (c. 200 A.D.) advocated total body cooling for intractable fevers.[17] He used a stone trough in his garden in which he placed his patients for cooling. Much to the reluctance of his assistants, he would order buckets of cold water poured over the naked and febrile client, who was kept immersed forcibly until the vapor rose several feet above the trough.

A century later, the "Chinese Hippocrates", Chang Chung-Ching, wrote a text on febrile diseases in which he stressed the importance of cooling and maintenance of the cooling regimen until strength had returned.[18] Fifteen hundred years later, Nathan Smith,[19] instrumental in the founding of Dartmouth, Yale, Vermont and Bowdoin medical colleges, wrote almost the exact same theme in his historic essay, *On Typhous Fever.* Seventy five years later witnessed William Osler[20] echoing the praises of body cooling for the same indications. One of the most striking results of the cooling therapy was the complete absence of nervous-system symptoms, "heretofore unseen" in Osler's experience. Although the average mortality from typhoid in 1900 in the United States was 10-15%, the mortality of cases at the Johns Hopkins Hospital was 24.2%. The increased mortality was due to the nature of the complicated cases being referred to Osler's service. Using the cooling regimen brought his mortality rate down to 7.1%.

In the eleventh century the "Prince of Physicians", Avecenna, found ice and snow of great utility in his practice. He had these elements brought down from the mountains principally for use as anodynes.[21] He stated, "The most powerful of narcotics is opium . . . and among the less powerful are snow and ice." A century and a half later, and in nearby desert country, the life of Richard-the-Lionhearted, leader of the Third Crusade, was saved by Sultan Salidin, his adversary, by the use of Avecenna's miraculous white remedy. Sir Richard, moribund with an unknown desert febrile illness, was packed in snow brought down from the distant Peak of Hermon on camelback.[22] Peace was made with Salidin, and he continued his convalesence at Haifa in 1192 A.D.

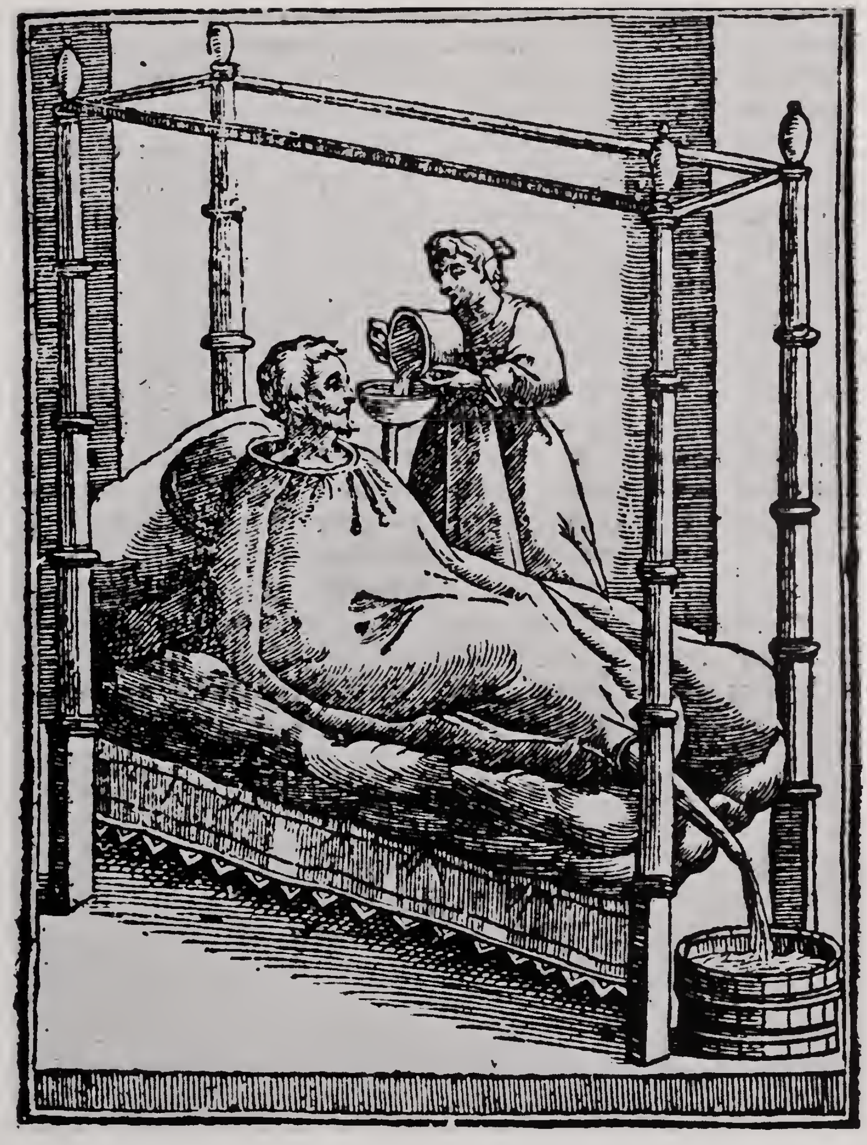


**FIG. 1. Illustration of the original cooling blanket, used by Sanctorius circa 1600 (Reference 24).**

Jerome Mercurialis (1530-1606) of Forli, Italy was both an astute physician and politician. Many a sober and pomptuous civil ceremony in the Embassy Service of Pius IV and in the Court of Emperor Maximillian was unceremoniously interrupted by Mercurialis' abrupt dash for the River Arnus. Unfortunately for him, a chronic and recurring state of renal calculi was attended by unpredictable bouts of severe renal colic. Fortunately for him, there was a spot in the Arnus where cold springs entered and where he could sit partially submersed while the chilling currents washed away his agony. His medical practice was devoid of the usual professional secrecy, for everyone came to know that the squatting figures in the River Arnus were the patients of Mercurialis, specialist in colicky diseases.[23]

The cooling blanket, considered the latest word in modern hospital outfitting today, is, in principle, similar to that designed by Santorio Sanctorius three and a half centuries ago.[24] His waterproof leather bag, called a "balneatorium," was but one of Sanctorius' remarkable contributions to medicine. He carried out the earliest basic studies in metabolism, perfected a chronometer for recording the pulse and made the earliest use of the thermometer for clinical purposes. This was a glass capillary tube filled with colored water and undoubtedly was borrowed from his close friend, Galileo, its inventor.[25] Furthermore, if the complacent, ultramodern cryotherapist believes he is treading new territory, dazzling his fortunate contemporaries with a new medical marvel, let him early consult such pristine and "archaic" works as

Thomas Bartholins' 1661 edition of *De Nivis Usu Medico*[26] as well as Sanctorius.[27]

The celebrated English physician, Thomas Sydenham, (1624-1689) broke with medical tradition by liberating his febrile patients from their brood-beds, buried beneath blankets and quilts designed to "sweat" the fever out of them by overheating them. He unembalmed them, covered them with light-weight sheets saturated with cold water and opened the windows to let in the wintery air.[28] Similar cooling regimens were later used by a few clinicians of note, namely, John Brown, Erasmus Darwin (father of Charles Darwin), William Cullen, Benjamin Rush, Richard Mead, Thomas Bond, and others. Such therapy, however, was resorted to when other, older, methods seemed to be failing. Blistering, bleeding, purifying and purging had not been replaced by cooling by these physicians.

The general acceptance of the "cold regimen", often in spite of its effectiveness as a last resort, was not to be the case. John Edmonds Stock wrote, in 1805 ". . . the adoption of the cold regimen . . . made so slow a progress, that there are many persons whose very existence has been endangered, and their constitution irreparably impaired, by a contrary treatment."[29]

## The Eighteenth Century

In spite of these voices in the wilderness the profession turned to less 'sloppy', less distasteful and less effort-consuming medicinals, clysters, leeches, cupping, bleeding, blistering, sweating and booze. Shakespeare's "lazy foot of time"[30] kept its steady pace, and the long, winding road of progress stretched on and on. Unheeded, hypothermy must wait in the wings for another century and a half while the professors, like aged paunchy dogs basking in the sun rolled over and licked themselves and, hardly disturbed by anything around them, slowly fell back to sleep.

The instructive report of Gardiner toward the end of the century became immediately buried in the heap of ignored medical literature.[31] He wrote of the plight of a dozen children belonging to a regiment marching from Glasgow to the Scottish Highlands during a particularly cold winter. They were without sufficient clothing and covered with less than a blanket apiece. Huddled in open panniers on horseback, they were exposed to the bitter cold and, more importantly, the wind. Along the march they were seized with the dreaded smallpox. The mortality for smallpox then was 1 in 3 or 4 under the best of sanitary conditions and care, and the regimental physician was under considerable apprehension. Regiments had been literally wiped-out or rendered completely useless by this scourge. Much to his surprise, however, his fears had been ill-founded, since, under the protection of the cold, the children sustained merely a mild illness and all of them survived. But smallpox continued to take its toll among the uncooled generations that followed.

Neurosurgeons today talk and write enthusiastically about the relatively recent findings concerning the gross alterations of the intracranial contents brought about by hypothermia. Regional or local cooling makes manipulation of the brain more feasible and less hazardous because of the contracted state and the reduction of vascularity. Because cooling technics are time-consuming and laborious, some have turned to relatively concentrated solutions of urea and mannitol for the reduction of postoperative or traumatic brain edema, with disappointing and conflicting results. The ultimate outcome of the use of glucocorticosteroids, more recently used, remains to be seen. But in proper hands, simple cooling has produced important contributions to the field and is considered by many to be the latest child of a marvelous age for neurosurgery . . . the age of new findings adding to the safety of their art.

It is disheartening enough to review the reception given the truly magnificent labors of their colleague, Temple Fay, 25 years ago; how much more so to realize their unawareness over the years of Jeannes Baptista Morgagni's demonstration, over 200 years ago, of the effects of cold upon the intracranial contents.[32]

Because of the extreme coldness of the winter of 1740 the body of a mason awaiting autopsy was placed in the unheated anatomical theater immediately after death, which had been caused by an accidental fall from a scaffold. When the cold had sufficiently remitted Morgagni removed the cranial cap from the specimen and recorded from his findings the first description of the effects of rapid cooling upon the brain, which was found to be contracted, more firm and less vascular than Morgagni had heretofore observed.

That cold was compatible with life processes and not necessarily the fearful, death-dealing demon that it was generally considered was attested to by numerous reports documenting human and animal survival after frigid exposure. Naucler,[38] of Sweden, reported in 1757 the case of a man, ladened with brandy, who was bowled-over by the wind and spent the night in a snowbank. He was found the next day and thought dead, there being no perceptible heart beat, respiration or other signs of life. While viewing him in his coffin, a physician friend sensed a faint flutter to his abdomen and began to rub the corps' extremities and apply warm fomentations. By the next day he had completely recovered.

The potential harmlessness of rapid freezing was described by John Fothergill in 1783.[34] He wrote of the Siberian birds that were literally frozen in flight, being thawed by peasants by simply taking them into their warm houses. According to Stock,[29] inhabitants in the same region consider it common experience to do the same with human travelers lost in the wintry wilderness.

The wintry wilderness formed the setting for another event antedating John Talbot's use of hypothermia for mental illness by a century and a half. The French humanist physician, Philippe Pinel[36] in 1791 recorded the case of a lunatic who had escaped from the asylum in the Pyrenees and ran naked into the brumal forest. He romped and played about in the snow without apparent ill-effects and gradually became dispossessed of his mania.

Thomas Beddoes[37] described the favorable effect of cold exposure upon the wounded English troops retreating from the banks of the Waal to Embden, Holland, during the dreadful winter of 1794. He was convinced that the exposure to the extreme cold had much to do with the salvage of many of the febrile and wounded. Not long afterwards, Napoleon's Surgeon to the Grand Army, Baron Larrey, confirmed this judgement.[38] Larrey also described the use of ice and snow in the performance of painless amputations and other operations upon soldiers in the field. He vividly told of the improved welfare of those ill with fever, forced to seek rest and shelter in the deep snow along the road. The echo of much of this exaltation resounded in the work of Frederick M. Allen, a century and a half afterwards.[39]

## The Nineteenth Century

Until about 1780 very little was known about body temperature ranges in either health or disease. No accurate data were available, and the evaluation of fever was obtained by palpation and by sensations disclosed by the patient or his attendant. The first thermometers had been made by the Florentine glass-blowers in the mid-1600's, but these were not accurate and not applicable to human recording, though, as previously mentioned, they were experimented with by Sanctorius. John Hunter had devised a mercurial thermometer in the late 1700's, but no one considered the instrument more than a mere curiosity, much as they did its maker. That is, until James Currie of Liverpool began to prepare his thesis on the effects of cold upon the living body.

Without previous temperature data to rely upon, Currie, first of all, investigated the normal temperature range of hundreds of normal subjects. He then carried out the first purposeful experimentation upon humans to determine the effects of various methods of cooling upon the body temperature, pulse, respiration, and other parameters.

William Wright's paper of this period, recounting his successful use of cold affusions in the treatment of malarias in the West Indies, had an important effect upon Currie when he was confronted with an outbreak of contagious fever during the winter of 1781.[41] Because of the intense cold, the Liverpool Infirmary, sealed from the external cold by plugging every crack and hole, became the perfect breeding ground for contagion. The fever spread throughout the Hospital, and with it the fear of the mortality always attending such incidents in those days. This was Currie's first opportunity to use cold therapy, and he did so with great success.

From this time on, for the remainder of his medical career, Currie documented a tremendous clinical experience employing cooling technics for the treatment of numerous clinical disorders. His were the first records of human temperatures in health and disease and in experimental environmental conditions. With his efforts was established the scientifically organized regimen for cooling the sick. For many years after Currie the mercurial thermometer was referred to, the world over, as Currie's thermometer.

Despite Currie's experience and publications and lectures, as well as the subsequent works of Stock, Giannini, Recamter, Edwards, LaCorbiere and others, all confirming Currie's work, clinical hypothermia never acquired the patronage of the profession or the public. Perhaps cold water and ice were too commonplace and too simple to use; water, ice and snow are much less impressive by comparison with the more colorful, odorous, painful, Latin-inscribed and expensive formulae. Certainly, no industry likened to a pharmaceutical house had ever promoted its use. Fay,[42] over a hundred years after Currie, struck the proper note in discussing this unused utility: "... it reflects the ever human tendency to ignore what is plentiful, common and easy at hand. The field of refrigeration or hypothermy is broad and deep, awaiting exploration by those who have modern facilities for physical therapy".

The nineteenth century became the century of physiological exploration. Every aspect of biological function became investigated. The timeless names of Barnard, Walther, Edwards, Horvath, Arnott and Langendorff, to mention but a sampling, will forever be linked with the beginnings upon which modern clinical hypothermia is built and too vast to document here. The stopping places along the long, long road taken by a single therapeutic agent, cold, brings to mind a commentary of Cicero.[43]

Cicero recorded the story of King Arganthouius, who lived 120 years and whose reign lasted 80 years. The Roman man of letters concluded concerning this king: ". . . still, nothing that has an end is long." In reviewing the long and tortuous historical pathway of cold therapy, the fallaciousness of Cicero's remark becomes apparent, for, indeed, the road is one of the longest routes ever taken to arrive at a destination, and the profession is still traveling the crooked route.

## References

1. SMITH, L. W.: Ann. Intern. Med., 1942, 17, 618.
2. HENDERSON, A. R.: Neurosurg., 1963, 20, 627.
3. FAY, T.: New York Med., 1940, 40, 1351.
4. BREASTED, J. H.: The Edwin Smith Surgical Papyrus, Vol. I. Chicago: University of Chicago Press, 1930.
5. ARNOTT, J.: Lancet, 1852, 1, 284.
6. FAY, T. and HENRY, G. C.: Surg. Gynec. Obstet., 1938, 66, 2.
7. FORBES, R. J., Studies in Ancient Technology, Vol. 6. Leiden: E. J. Brill, 1958, 101.
8. PLINY: Historia Naturalis, 26:14; 29:15.
9. HOMER: The Iliad, Bk. I. Cold affusions also mentioned in The Odyssey, Bk. X, 362.
10 ADAMS, F., The Genuine Works of Hippocrates. New York: William Wood, 1929, 444, 741-742.
11. WEBB, G.: Tuberculosis, Clio Medica Series. New York: Paul Hoeber, 1936.
12. ADAMS, F. The Extant Works of Aretaeus The Cappadocian. London: The Sydenham Society, 1856, 428.
13. SPENCER, W. G.: Celsus: De Medicina. London: W. Heinemann, 1948, Vol. 1, 311.
14. FLOYER, J.: The History of Cold Bathing, Both Ancient and Modern, 4th Ed., London: William Innis, 1715, 19.
15. LABORIT, H., and HUGENARD, H.: Presse Med., 1951, 59, 1329.
16. SENECA: Epist. Morales, 78:23 and Quaest. Naturalis, IV, 13:7.
17. WONG K. C. and LIEN-TEH, W.: History of Chinese Medicine. Shanghai: National Quaranteen Service, 1936, 54.
18. MORSE, W. R.: Chinese Medicine. New York: Paul Hoeber, 1934, 104.
19. SMITH, N. A.: A Practical Essay on Typhous Fever. New York: Bliss and White, 1824.
20. OSLER, W.: Studies in Typhoid Fever. Baltimore: Johns Hopkins Press, 1901.
21. MILLER, J. A. The influence of temperature on resistance to asphyxia, in: The Influence of Temperature on Biological Systems. F. H. Johnson, Ed., American Physiological Society, 1957, 87.
22. LAMB, H., The Crusades, Vol. 2. The Flame of Islam, 192ff. Garden City, New York: Doubleday, 1930.
23. FLOYER, J. op. cit., 92.
24. SANCTORII SANCTORII: In Primam Fen Primi Libri Canones Avicenne. Venis, 1666, 567.
25. MAJOR, R. H., SANTORIO SANCTORIUS: Ann. Med. Hist., 1938, 10, 369.
26. BARTHOLIN, T.: De Nivis Usu Medico. Hafniae P. Haubold, 1661.
27. SANCTORII SANCTORII, op. cit., 110.
28. SWAN, J.: The Works on Acute and Chronic Diseases of Thomas Sydenham, with Notes by Benjamin Rush. Philadelphia: Thomas Kite, 1809, 390-391.
29. STOCK, J. E.: Medical Collections on the Effects of Cold. London: Longman, Hurst, Rees and Orme, 1805, 81.
30. SHAKESPEARE, W.: As You Like It. iii, 2; 322.
31. GARDINER, J.: Observations on the Animal Oeconomy, and on the Causes and Cure of Diseases. Edinburgh: W. Creech, 1784, 105.
32. MORGAGNI, J. B., DeSedibus et Causes Mororum, Translation of Benjamin Alexander. London: Miller and Cadell, Johnson and Payne, 1769, 294.
33. NAUCLER, S.: Berichte von einem Mannes welcher dem Auschein nach efroren war denn aber wie der zum Laben verhollen war. K. Schwen. Akad. Wiss., 1757, 18, 107.
34. LETTISON, J. C.: The Works of John Fothergill, M.D., Vol. I. London: C. Dilly, 1783, 330.
35. TALBOT, JOHN H.: New Eng. Med., 1941, 224, 281.
36. PINEL, P.: Traite Medico-philosophique sur l'alienation Mentale. Paris: Richard, Caille and Ravier, 1791, 180.
37. BEDDOES, T.: Hygeia, Vol. II. Bristol: R. Phillips, 1802-03, 49.
38. LARREY, D. J., Memoirs of Military Surgery and Campaignes of the French Armies, Translation of R. W. Hall. Baltimore: J. Cushing, 1814.
39. ALLEN, F. M.: Amer. J. Surg., 1941, 52, 225.
40. CURRIE, J.: Medical Reports on the Effects of Water, Cold and Warm, as a Remedy in Fever and Other Diseases, 2 Vols., Liverpool: J. McCreery, 1804.
41. CURRIE, W.: Memoirs of the Life, Writing and Correspondence of James Currie, M.D., F. R. S., of Liverpool. Liverpool: Longmans, Ries, Orme, Brown and Green, 1831, 219.
42. FAY, T., J. Neurosurg., 1959, 16, 3.
43. CICERO, MARCUS TULLIS; An Essay on Old Age. The Orations, translation of Laelius. London: A. J. Valpy, 1833.

# Clinical Significance of Circulating Proinsulin*

RAUL A. GUTMAN, M.D.† AND
LILLIAN RECANT, M.D.‡

INSULIN BIOSYNTHETIC MECHANISMS in the pancreatic beta cell have been for many years a subject of discussion amongst biochemists. Since insulin is a 2-chain polypeptide molecule of approximately 6000 M.W. (Fig. 1), 2 mechanisms of synthesis were considered: (a) Two peptide chains are separately synthesized and subsequently assembled by the SH groups, and (b) A single-chain precursor of larger size than insulin is initially formed from which the insulin molecule is proteolytically cleaved out.[1] Because of the work of Steiner and co-workers[2] in the past few years, we now know that the latter hypothesis is true. These workers discovered the existence of proinsulin, a single-chain molecule of approximately 9000 M.W. which consists of an insulin molecule to which a connecting peptide (C-peptide) running from the amino terminal end of the A-chain to the carboxyl terminal end of the B-chain is attached. So far, proinsulin has been found in all animal species in which insulin is present. The amino acid sequences of porcine,[3] bovine,[4] and human[5] proinsulin have been elucidated. In addition, trypsin digestion of porcine, bovine and rat proinsulin to desalanine insulin have been demonstrated.[2] The conversion of human proinsulin to intact insulin has recently been accomplished by the combined use of trypsin and carboxypeptidase B.[6]

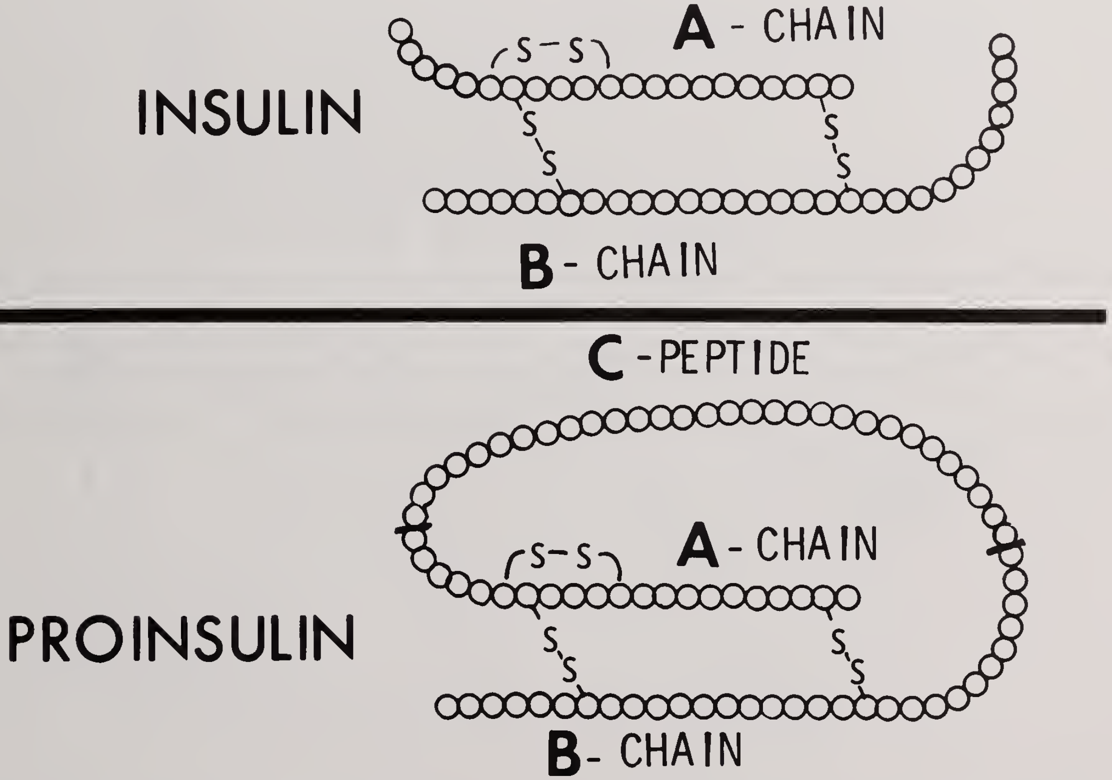


FIG. 1. The single-chain proinsulin molecule is composed of an insulin molecule plus a connecting peptide (C-peptide) which connects the amino terminal end of the A-chain with the carboxyl terminal end of the B-chain.

---

* From the Veterans Administration Hospital Diabetes Research Laboratory and The Department of Medicine, Georgetown University School of Medicine, Washington, D.C. Supported in part by funds from NIH Grant AM 11578.

† Research Associate

‡ Chief, Diabetes Research Laboratory, Veterans Administration Hospital; Professor of Medicine, Georgetown University School of Medicine, Washington, D.C.

### Immunological Properties of Proinsulin

Proinsulin shares several immunologic properties with insulin. An insulin antibody will cross-react to varying degrees with proinsulin and vice versa.[2] It is therefore impossible to differentiate between proinsulin and insulin on an immunochemical basis, using either an insulin or proinsulin antibody. Antigenic sites in proinsulin are present in both the C-peptide and the insulin portion of the molecule. Although all species of insulin cross-react with each other, the C-peptide of proinsulin is highly species-specific and will therefore not cross-react with an antibody made against a C-peptide of a heterologous species. This is because of the great differences in the amino-acid composition of the proinsulin C-peptide as compared to the small amino-acid composition differences among insulins of heterologous species. Thus, only an antibody made against the C-peptide will recognize a particular species of proinsulin without being able to recognize that species of insulin.

At the present time proinsulin determinations in the presence of insulin are carried out by the use of gel filtration. This procedure physically separates proinsulin from insulin on the basis of their difference in size. Subsequently, immunoreactive insulin determinations (IRI) are performed in the elution position, of the proinsulin and insulin standards (Fig. 2). Proinsulin determinations on samples of human origin should be considered semi-quantitative because of 2 main reasons: (a) Gel filtration is a rather poor separation procedure. Our laboratory has developed a polyacrylamide gel electrophoresis which permits the separation of IRI serum components in $\mu$U quantities.[7] By the use of this method we have been able to show that homogenous peaks obtained after sephadex filtration may contain several components (Fig. 3). In the process of conversion of proinsulin to insulin, intermediate species of molecular weight close to proinsulin and insulin may be formed. These intermediate IRI species which may have different immunological, as well as biological and pathophysiological significance will be easily missed by the use of gel filtration as the sole separation procedure. (b) Small immunoreactive difference have been reported among insulins of various species. On the contrary, proinsulins of different species have been shown to vary greatly in their cross-reactivity with insulin antibodies of heterologeous species.

IRI determinations are usually carried out with a porcine or bovine insulin antibody and either human, porcine or bovine insulin as a standard. In our immunoassay system with a porcine insulin antibody and a human insulin standard, porcine proinsulin is about 1/4 as effectively found by the antibody as compared to porcine insulin. Under these conditions the only possible quantitative estimations of proinsulin are the ones that express the results as the relative concentration of proinsulin (percentages of proinsulin) to the total amount of IRI present in the sample. Absolute quantitative determinations of proinsulin in human samples will be possible only with the use of a combination of highly discriminative procedures of separation of IRI components (proinsulin, intermediates and insulin) plus immunochemical methods with antibodies and standards of human origin.

### Biological Properties of Proinsulin

For every parameter of biological activity so far tested, proinsulin has been shown to have the same qualitative activity as insulin. This has been true in both *in vivo* and *in vitro* systems (adipose tissue, muscle, liver). The only differences between the biological activities of proinsulin and insulin have been quantitative ones. We have reported that 4 times more of porcine proinsulin (on molar basis) is necessary to inject into rats in order to match the hypoglycemic effect obtained with porcine insulin and that 6 times more of molar quantities of proinsulin produced similar glucose uptake in the rat hemidiaphragm system induced by insulin.[8] Some investigators have reported that proinsulin has only 2 to 10% the biological potency of insulin on adipose tissue.[9-11]

It is still argued whether proinsulin exerts its biological activity after being enzymatically converted to insulin by a trypsin-like system. Shaw and Chance favored the latter possibility based on the fact that KPTI, a trypsin-inhibitor, abolished the biological activity of proinsulin on both adipose tissue and muscle.[9] Although we have observed some inhibition of proinsulin action *in vitro* by KPTI, we have been unable to ascribe this effect of KPTI to its anti-trypsin activity.[10-12] Further, we have shown that KPTI did not show any inhibition of proinsulin activity *in vivo*.[8] Several other workers also failed to obtain any evidence of KPTI inhibition of proinsulin activity. By the use of both gel filtration and gel electrophoresis we have been unable to observe any evidence of conversion of proinsulin to either intermediate forms or insulin *in vivo* and *in vitro* systems[8,13] Although the data so far available suggest that the proinsulin molecule is biologically active by itself, the methods currently used do not rule out the possibility of conversion at the cell membrane receptor site. The smaller biological

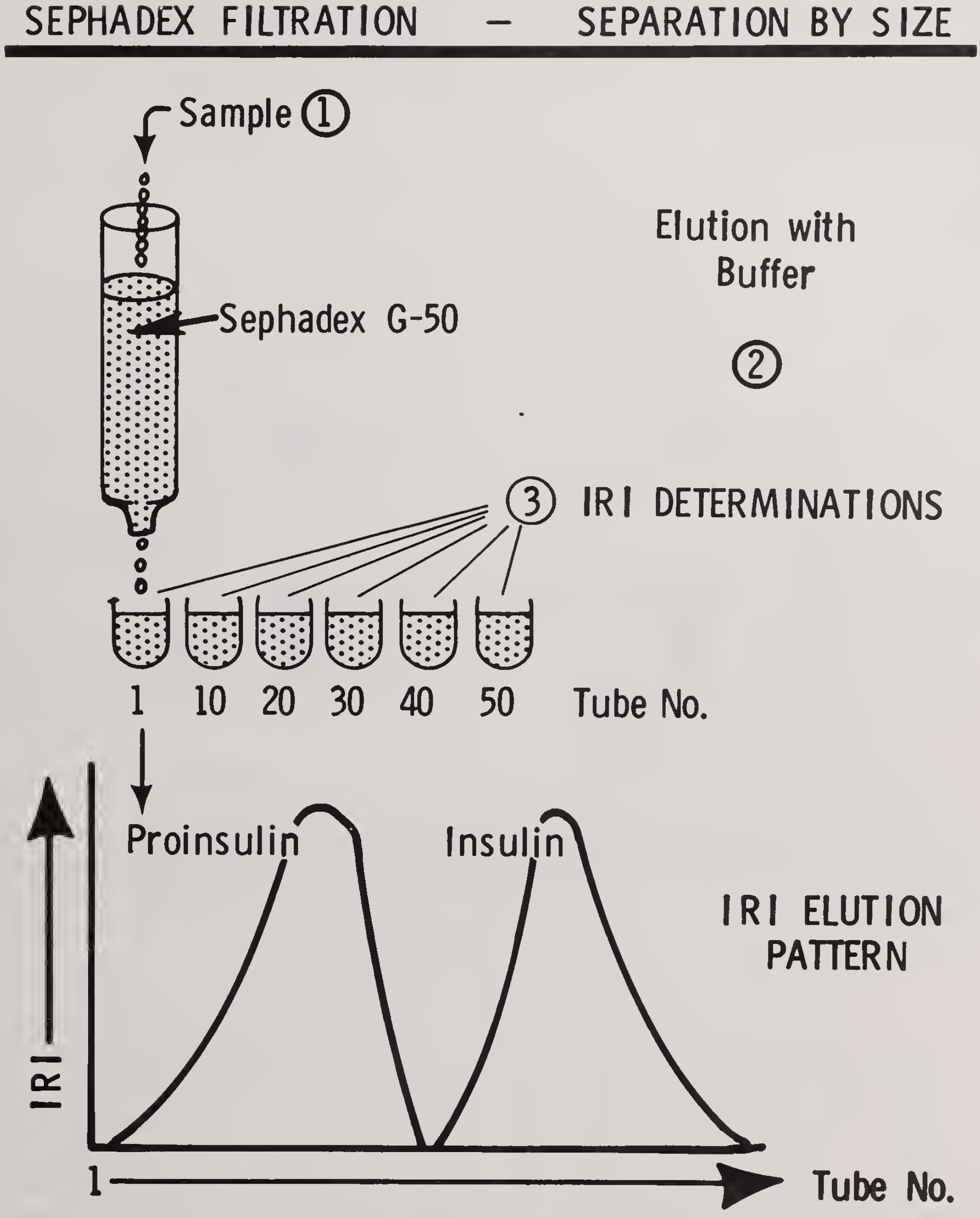

SEPHADEX FILTRATION — SEPARATION BY SIZE
Sample ①
Sephadex G-50
Elution with Buffer
②
③ IRI DETERMINATIONS
1
10
20
30
40
50
Tube No.
Proinsulin
Insulin
IRI ELUTION PATTERN
IRI
1
Tube No.

FIG. 2. Separation of IRI components on a sephadex column—1. Sample contining IRI material is applied to the column. 2. While buffer is running through the column the IRI components are separated on the basis of their difference in size. 3. The eluate is collected in small volume samples on which IRI determinations are subsequently carried out. In the lower panel, the amount of IRI found in each fraction is plotted against the elution volume (Tube No.). This is called IRI elution pattern on sephadex filtration. The fraction eluting in the same position of a proinsulin standard is called proinsulin or more accurately proinsulin-like material.

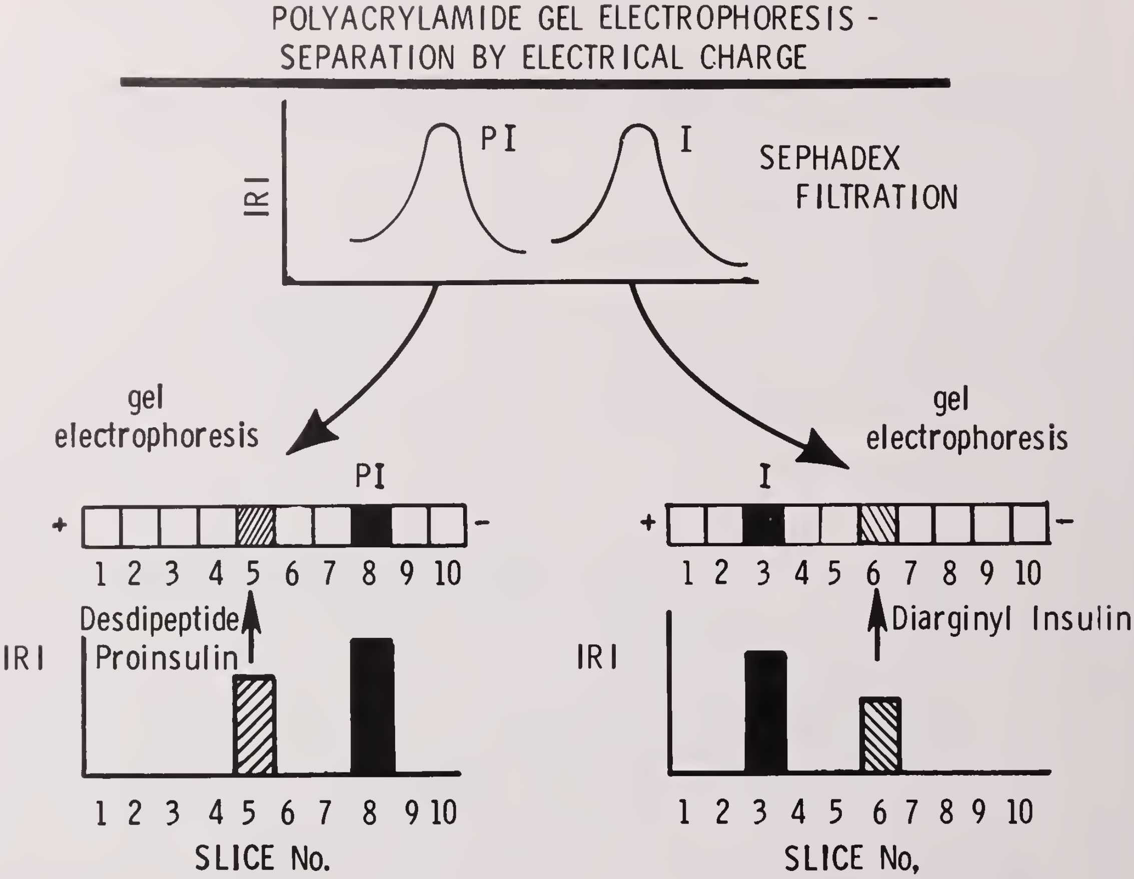

POLYACRYLAMIDE GEL ELECTROPHORESIS - SEPARATION BY ELECTRICAL CHARGE
IRI
PI
I
SEPHADEX FILTRATION
gel electrophoresis
gel electrophoresis
PI
I
+
-
1 2 3 4 5 6 7 8 9 10
Desdipeptide Proinsulin
Diarginyl Insulin
IRI
IRI
1 2 3 4 5 6 7 8 9 10
SLICE No.
SLICE No.

FIG. 3. After separation of the proinsulin-like material (PI) and insulin (I) fractions on sephadex, each peak was separately electrophoresed on polyacrylamide gels. Thus, intermediate IRI components may not have a size difference big enough to be separated on sephadex filtration from either proinsulin or insulin. However, they are easily separated on charge basis by gel electrophoresis.

activity of proinsulin as compared to insulin is believed to be related to its lower binding affinity for the insulin receptor. No evidence for a specific receptor for proinsulin has been demonstrated.

## Proinsulin in the Pancreatic Beta Cell

Like any other protein, proinsulin is synthesized by the ribosomes of the rough endoplasmic reticulum. By a still obscure process, the newly synthesized proinsulin is packed into large pale immature granules, a function probably carried out by the Golgi apparatus. The enzyme system which converts proinsulin to insulin appears to be attached to the inner surface of the beta-cell granules. The mature, dense beta-cell granule, ready to be secreted contains mostly insulin and C-peptide (Fig. 4). C-peptide seems to be present in the pancreas in equimolar concentrations with insulin.[14]

## Circulating Proinsulin

Little is known about the regulation of proinsulin secretion from the pancreatic beta cell. In the *in vitro* experiments carried out in our laboratory with isolated rat islets of Langerhans we have observed proinsulin secretion into the incubation medium to occur with concentration of glucose above 100 mg% and by the use of known insulin-releasing agents such as dibutyrycyclic AMP, theophylline and tolbutamide.[15]

That proinsulin is physiologically secreted into the circulation was suggested by the first observation of Roth, Gorden and Pastan[16] that normal human plasma contained a second IRI material larger in size than insulin which they called Big Insulin. There is now little doubt that the first IRI peak obtained in the region of 9000 M.W. after sephadex filtration of human serum represents at least in part proinsulin.

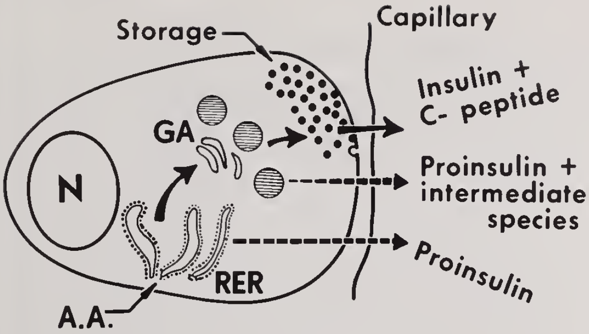


FIG. 4. Schematic representation of a pancreatic islet beta cell. After being exposed to an appropriate stimulus (glucose for instance) amino acids (AA) are incorporated into the ribosomal fraction of the rough endoplasmic reticulum (RER) where proinsulin is synthesized. It is believed that most of the newly synthesized material is packaged into large pale immature granules by a process in which the Golgi Apparatus (GA) plays a prominent role. In the process of maturation of these granules proinsulin is converted into intermediate species and insulin plus C-peptide by an enzyme system probably present in the inner surface of the granular membrane. Most of the secreted material comes from the mature granules containing insulin and C-peptide (full arrow). However, secretion may also occur at any stage of the above-mentioned process resulting in the extrusion of both proinsulin and intermediate species (dashed arrow).

Because we have shown previously that homogeous IRI peaks eluting after sephadex filtration as the proinsulin standard may contain intermediate IRI species apart from proinsulin, we prefer to call this peak proinsulin-like material.

In addition to the difficulties of measuring absolute concentrations of proinsulin in human sera, studies on the dynamics of proinsulin secretion *in vivo* are further complicated by the fact that plasma clearance of proinsulin is significantly slower than insulin. In agreement with other workers,[17] we have shown that plasma disappearance time of porcine proinsulin in the pig is 2-3 times slower than that of porcine insulin (Fig. 5). Neither liver[18] nor muscle[19] seem to degrade proinsulin. Beside renal excretion[20] the fate of circulating proinsulin is unknown.

### Clinical Importance of Circulating Proinsulin-Like Material

A proinsulin-like material sharing several characteristics of proinsulin has been found in serum.[21] The levels of plasma proinsulin-like material in normal persons and patients with a variety of pathologic conditions have been shown to be low in comparison with insulin. Gorden and Roth[22] and Melani et al[21] reported 0 to 29% of the total plasma IRI to be eluting as a proinsulin-like material after the administration of oral glucose to normal subjects and patients with idiopathic glucose intolerance or acromegaly. Goldsmith, Yalow and Berson[23] studied after oral glucose administration a total of 32 subjects, including lean and obese normal subjects, lean and obese diabetic patients, and patients with myotonic dystrophy, uremia and myxedema. None of 59 plasma samples examined were found to contain over 20 % of the total IRI in the proinsulin-like material fraction.

In our series[24] intravenous tolbutamide given alone or in combination with oral and intravenous glucose to a total of 9 normal-weight and 4 obese subjects resulted in levels of proinsulin-like material in the range of 0 to 20% of the total plasma IRI. In the same publication we reported a series of 11 patients with functioning pancreatic islet-cell tumors, 9 of whom had large amounts of proinsulin-like material in the circulation (28 to 89%), 3 fasting and

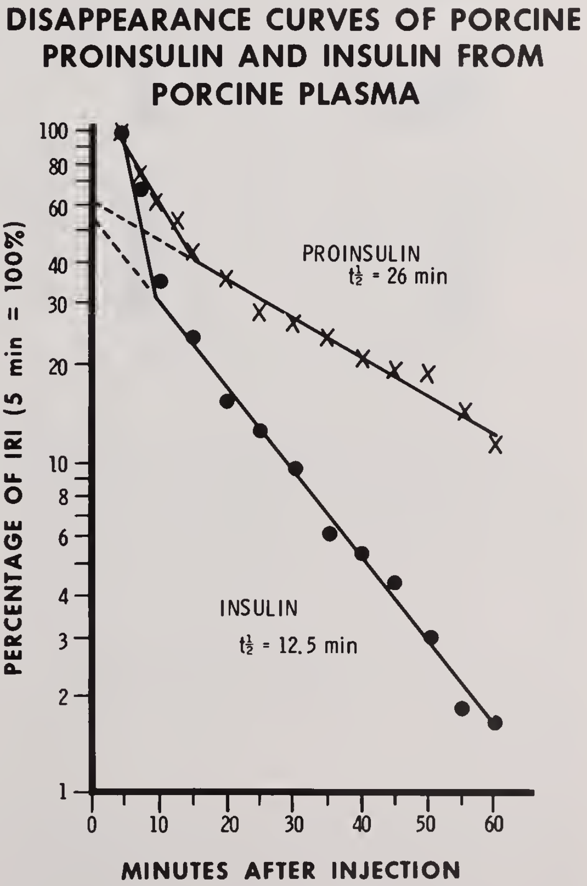


FIG. 5. 1 × $10^{-9}$ moles of unlabelled purified porcine proinsulin and monocomponent insulin per kg were injected IA at 0 time. IRI value at minute 5 was considered 100% to allow complete mixing. As can be seen, proinsulin had a 2- to 2.5-fold slower disappearance time when compared with insulin. Identical findings were obtained with larger and smaller concentrations of proinsulin and insulin.

6 after intravenous tolbutamide (Figs. 6 and 7). These results extend the initial reports by this laboratory that patients with islet-cell tumors may have large amounts of proinsulin-like material in the circulation.[25,26] Isolated reports of elevated plasma proinsulin-like material in 5 patients with islet-cell tumors have already been published.[22,23,27,28]

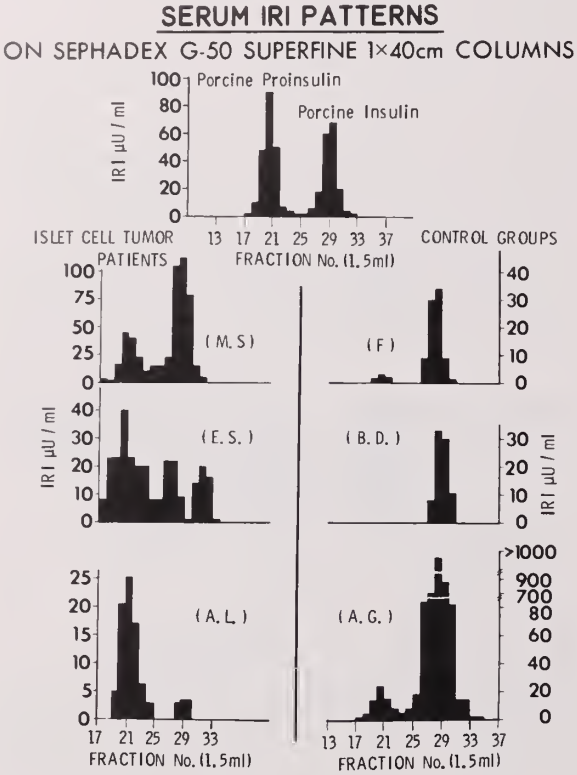


**FIG 6.. Serum levels of proinsulin-like material (PLM). The squares represent obese subjects. As can be seen, overlap occurs between levels of proinsulin-like material in obese subjects and patients with islet-cell tumor (left panel). When values are expressed as a percentage of the total IRI (right panel), this overlap is eliminated and only the patients with tumor show more than 20% of higher molecular weight forms. "N" indicate normal control groups, "FH": patients with functional hypoglycemia "ICT": patients with islet-cell tumor, "T": 1 gm IV tolbutamide tested, and "G+T": 300 gm glucose (150 orally–150 IV) + 1 gm IV tolbutamide tested. Reproduced from N. Eng. J. Med. 284; 1003, 1971, Gutman et al.**

Thus far, islet-cell tumor is the only condition in which elevated percentages of circulating proinsulin-like material have been demonstrated.

Islet-cell tumors often show selective alterations in IRI secretion in response to various stimuli. Quantitative IRI response to glucose is frequently poor as compared with tolbutamide or leucine.[29] The results in our group of patients with insulinoma indicate that such abnormality is also qualitative in that elevated levels of proinsulin-like material may contribute to the increased IRI levels observed after tolbutamide stimulation. In 1 patient of this series (E.S.) a qualitative difference was noted between tolbutamide and glucose stimulation, with 71% of the plasma IRI in the proinsulin-like fraction after tolbutamide and only 5% after oral glucose (Fig. 8).

In an effort to characterize further the IRI found in patients with islet-cell tumor, plasma acid alcohol extracts from 2 patients with adenoma were examined by polyacrylamide gel electrophoresis. IRI species behaving as proinsulin intermediates and insulin were found (Fig. 9). In a patient with an islet-cell carcinoma (A.L. in Fig. 6), we found that over 85% of the IRI eluted after sephadex filtration as a homogeneous proinsulin (PI) peak. On polyacrylamide gel electrophoresis, this peak consisted of proinsulin and a proinsulin intermediate. Thus, islet-cell tumors release a variety of proinsulin-like materials into the circulation in addition to insulin.

The possibility that the increased levels of proinsulin found in the serum of patients with islet-cell tumor result from high rates of insulin secretion seems unlikely for a number of reasons. One patient who showed high total plasma IRI values (285 µU per ml) had normal values of proinsulin-like material. Conversely, 2 patients with islet-cell tumor responding with low total plasma IRI after tolbutamide (48 to 58 µU ml), had 49 and 48% of the IRI in the proinsulin-like material fraction. Finally, 4 obese subjects with plasma IRI levels well within those found in the patients with tumor had normal percentages of plasma proinsulin-like material (Fig. 7).

The present data do not permit assessment of the role of other possibilities regarding the increased levels of proinsulin-like material and intermediates in the serum of patients with islet-cell tumor. In terms of the degree of malignancy the highest levels of circulating proinsulin-like material so far reported have been observed in patients with islet-cell carcinomas; one (A.L.) of this series, and another of Dr. Phillip Gordon,[30] showed 85 and 80% of proinsulin-like material. Malignant tumors may contain mutant forms of beta cells which have lost certain functions necessary either in biosynthesis conversion, and/or secretion of insulin. Hence, we would like to formulate the hypothesis that the more malignant an islet-cell tumor the higher the levels of proinsulin and/or intermediate IRI forms to be found.

Three patients with functional hypoglycemia had normal levels of proinsulin-like material, suggesting that no correlation exists between plasma proinsulin and hypoglycemia (Fig. 7).

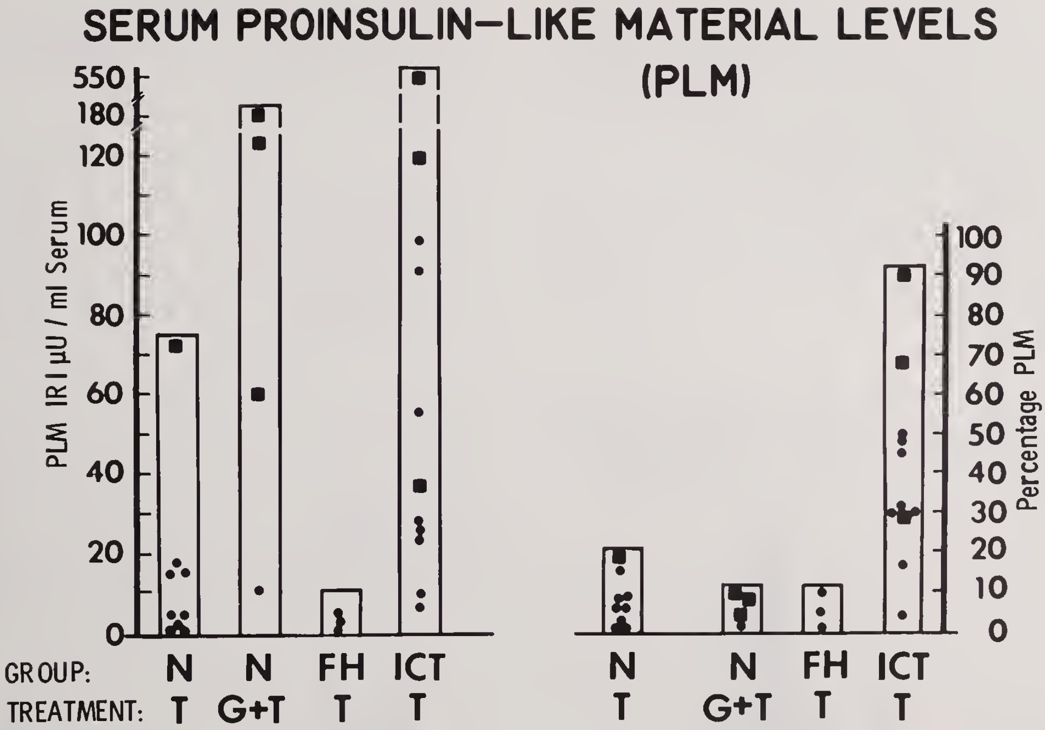


**FIG. 7. Serum IRI patterns on sephadex G-50 superfine 1 × 40 cm columns. The upper panel shows determination of porcine proinsulin and insulin positions on a sephadex column. In the lower panel, serum IRI patterns are indicated after gel filtration of a selected sample of patients with islet-cell tumor (lfet hand side) and control subjects (right hand side). Patterns of subjects F., B.D., A.G. and E.S. were obtained with filtration of 2 ml of serum obtained 15 minutes after 1 gm of intravenous tolbutamide. F is a normal weight control subject, B.D. a patient with functional hypoglycemia, and A.G. an obese control subject. M.S. is a fasting sample, and pattern A.L. (carcinoma) a fasting sample of which only 0.2 ml of serum was filtered. Reproduced from N. Eng. J. Med. 284: 1003, 1971, Gutman et al.**

The injection of 1 gm. of intravenous tolbutamide is the test most widely used in the screening of hypoglycemic patients in whom an insulinoma is suspected. However, the test has certain limitations. A normal plasma IRI reponse after tolbutamide (false-negative response) was observed in approximately 20% of patients with proved insulinoma.[29] In 2 of our patients who had what might be called false-negative responses we have shown elevated percentages of plasma proinsulin-like material. On the other hand, an excessive IRI response in non-insulinoma patients (false-positive) response was found in certain obese subjects.[31] Our observations in the obese hypersecretory group of subjects indicate that the percentage of proinsulin-like material is within normal limits. Therefore, the measurement of percentages of proinsulin-like material in serum samples obtained during a tolbutamide test should be helpful in excluding both false-positive and false-negative plasma IRI responses in patients with suspected insulinoma.

In summany, any patient with hypoglycemia who shows an elevated percentage of proinsulin-like material should be suspected of having an insulinoma. One patient (E.S.) (Fig. 8) showed a fall to normal levels of plasma proinsulin-like material after treatment, as did the patients reported by Melani et al[18] and Blackard et al.[27] Thus, the monitoring of serum proinsulin-like material levels after treatment may provide, in addition, an index of efficacy of treatment.

### Biological Role of Proinsulin and C-Peptide

Besides its role in the biosynthetic process of insulin inside the beta cell, the physiological and/or pathological functions of proinsulin remain unknown. Of particular interest is the significance of the circulating proinsulin and/or intermediate species. Several possibilities have been advanced: (a) Competition with insulin and/or modification of insulin action, (b) some specific biological action, (c) specificity for certain target tissues. No experimental evidence has been produced to support any of those possibilities.

The C-peptide has been found in considerable amounts in the circulation.[32] No specific biological activity for the C-peptide has been found.[11] Speculations similar to the ones mentioned for circulating proinsulin have been forwarded regarding the biological role of the C-peptide.

It is difficult to accept that circulating proinsulin and C-peptide are just an accident with no biological meaning. Improved techniques and new approaches to this problem may finally shed light upon this puzzling question.

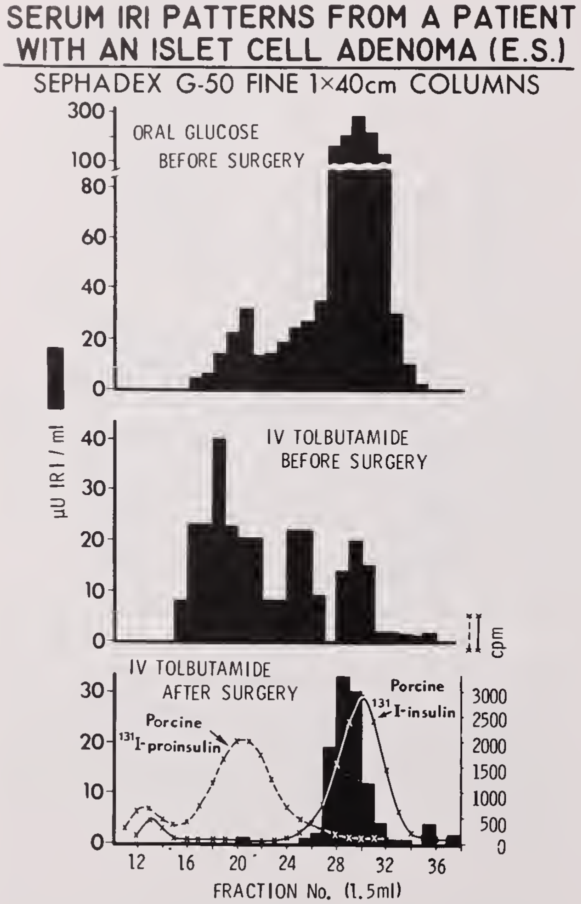


FIG. 8. Serum IRI patterns from a patient with islet-cell adenoma (E.S.) on sephadex G-50 fine 1 × 40 cm columns. Upper and middle panels represent pre-operative IRI patterns of serum obtained 30 minutes after oral glucose and 15 minutes after intravenous tolbutamide; after tolbutamide 71% of the IRI elutes at the position of proinsulin. In the middle and lower panels the pre-operative and postoperative IRI patterns of serum obtained 15 minutes after 1 gm of intravenous tolbutamide are compared. After surgery, the % of proinsulin-like material reverted to normal values, making the IRI patterns indistinguishable from those of a normal subject (see Fig. 7); 2 ml of serum was filtered in all cases. Porcine $131_I$ proinsulin and $131_I$-insulin are used to demarcate the proinsulin and insulin elution positions. Reproduced from N. Eng. J. Med. 284: 1003, 1971, Gutman et al.

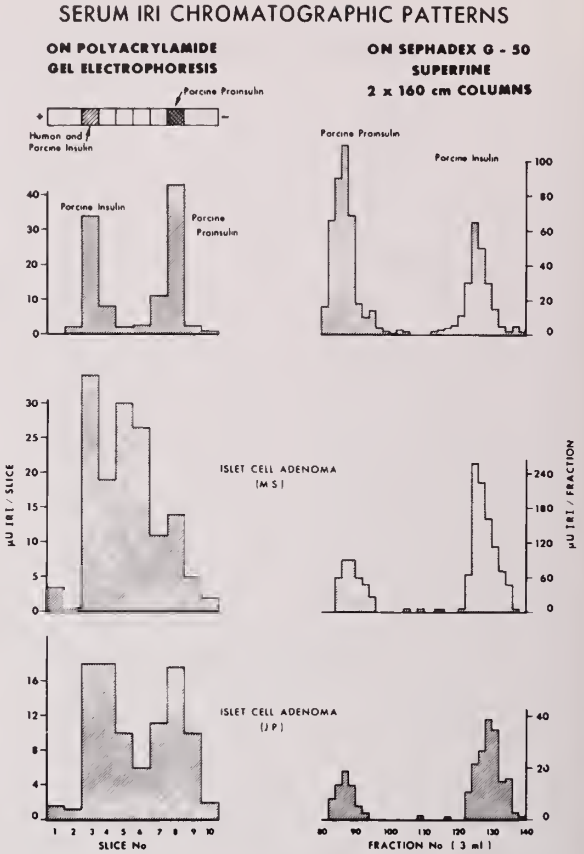


Fig. 9. Comparison of IRI patterns of sephadex gel filtration (right hand side) and polyacrylamide gel electrophoresis (left hand side). The upper panel shows the standardization with porcine proinsulin and insulin of sephadex G-50 and polyacrylamide gel electrophoresis. The middle and lower panels represent the serum IRI patterns of 2 patients with islet-cell adenoma. Although gel filtration patterns in both patients are essentially identical, the polyacrylamide patterns are very different in that patient M.S. has significant amount of IRI material migrating as an intermediate species. Reproduced from N. Eng. J. Med. 284: 1003, 1971, Gutman et al.

## References

1. RIESER, P.: Insulin, membranes and metabolism. Baltimore: Williams and Wilkins Company, 1967.
2. STEINER, D. F. AND OTHERS: Recent Progr. Hormone Res., 1969, 25, 207.
3. CHANCE, R. E., ELLIS, R. M. AND BROMER, W. W.: Science, 1968, 161, 165.
4. NOLAN, C., MARGOLIASH, E. AND STEINER, D. F.: Fed. Proc., 1969, 28, 343.
5. OYER, P. E., CHO, S., PETERSON, J. D. AND STEINER, D. F.: J. Biol. Chem., 1971, 46, 1375.
6. KEMMLER, W., PETERSON, J., BORG, J., NEHRLICH, S. AND STEINER, D. F.: Diabetes, 1971, 20, 332.
7. LAZARUS, N. R., GUTMAN, R. A. AND RECANT, L., Anal. Biochem., 1971, 40, 241.
8. LAZARUS, N. R. AND OTHERS: J. Clin. Invest., 1970, 49, 487.
9. SHAW, W. N., AND CHANCE, R. E.: Diabetes, 1968, 17, 737.

10. GLIEMANN, J. AND SORENSEN, H. H.: Diabetologia, 1970, 6, 499.
11. KITABCHI, A. E.: J. Clin. Invest., 1970, 49, 979.
12. CHALLONER, D. R., PAO-LO YU: Diabetes, 1970, 19, 289.
13. PENHOS, J. C. AND OTHERS: Horm. Metab. Res., 1970, 2, 43.
14. STEINER, D. F. AND OTHERS: J. Biol. Chem., 1971, 246, 1365.
15. TANESE, T., LAZARUS, N. R., DEVRIM, S. AND RECANT, L.: J. Clin. Invest., 1970, 49, 1394.
16. ROTH, J., GORDEN, P. AND PASTAN, I.: Proc. Nat. Acad. Sci. U.S.A., 1968, 61, 138.
17. STOLL, R. W., TOUBER, J. L., WINTERSCHEID, L. C., ENSINCK, J. W. AND WILLIAMS, R. H.: Endocrinology, 1971, 88, 714.
18. STOLL, R. W., TOUBER, J. L., MENAHAN, L. A. AND WILLIAMS, R. H.: Proc. Soc. Exp. Biol. Med., 1970, 133, 894.
19. BRUSH, J. S.: Diabetes, 1971, 20, 140.
20. RUBENSTEIN, A. H., CHO, S. AND STEINER, D. F.: Lancet, 1968, 1, 1355.
21. MELANI, F., RUBENSTEIN, A. H., STEINER, D. F.: J. Clin. Invest., 1970, 49, 497.
22. GORDEN, P., ROTH, J.: J. Clin. Invest., 1969, 48, 2225.
23. GOLDSMITH, S. J., YALOW, R. S. AND BERSON, J. A.: Diabetes, 1969, 18, 334.
24. GUTMAN, R. A., LAZARUS, N. R., PENHOS, J. C., FAJANS, S. F. AND RECANT, L.: New Eng. J. Med., 1971, 284, 1003.
25. LAZARUS, N. R., TANESE, T., AND RECANT, L.: Diabetes, 1969, 18 (Suppl 1), 340.
26. LAZARUS, N. R., TANESE, T., GUTMAN, R. A., AND RECANT, L.: J. Clin. Endocr., 1970, 30, 273.
27. BLACKHARD, W. F., GARCIA, A. R. AND BROWN, C. L., JR.: J. Clin. Endocr., 1970, 31, 215.
28. MELANI, F. AND OTHERS: New Eng. J. Med., 1970, 283, 713.
29. FLOYD, J. C. AND OTHERS: J. Clin. Endocr., 1964, 24, 747.
30. GORDEN, P., FREYCHET, P. AND NANKIN, H.: Diabetes, 1971, 30, 334.
31. SAMOLS, E. AND MARKS, V.: Evaluation of the intravenous tolbutamide test in the recognition and differentiate diagnosis on spontaneous hypoglycemic in tolbutamide . . . . After ten years (International Congress Series No. 149). Edited by W.J.H. Butterfield, W. Van Westering. Amsterdam: Excerpta Medica, 1967.
32. MELANI, F., RUBENSTEIN, A. H., OYER, P. E. AND STEINER, D. F.: Proc. Nat. Acad. Sci. U.S.A., 1970, 67, 148.

# President's Page

## Incorporation in the District of Columbia

Currently, all fifty states have laws that permit physicians to incorporate their practices. Only the District of Columbia remains a stepchild. There are some variations in individual state laws, but basically professionals are eligible to incorporate either a solo practitioner or as a group if they wish to. These laws affect physicians, lawyers, dentists, architects, and other professionals.

In testimony before the Congressional House District Committee, we pointed out that some doctors are moving out of Washington and into the suburbs to avail themselves of the opportunity to incorporate. In moving to the suburbs they can still preserve most of their patient contacts and hospital privileges. On the other hand, once a physician moves into Virginia or Maryland, even though he is close to the District line, his practice takes on more of a suburban character. The net result is loss of medical talent to the District of Columbia, thus increasing a shortage that already exists. It was further pointed out that plans for the development of Health Maintenance Organizations in which large numbers of doctors might work together would be virtually impossible in any setting other than that of a corporate structure. Despite pleas from our Society and our other professional colleagues, there has persisted some resistance to the passage of this measure.

One important feature of the present District law is a Franchise tax on all businesses that are permitted to incorporate whether or not they choose to. The Congressional opponents of this bill feel that physicians and other professionals should be treated like all other businesses in the District, and be subject to a Franchise tax on a percentage of their gross income whether or not they are incorporated. Our Society and the Bar Association have taken the position that although they wish the right to incorporate, they would prefer to have no bill at all than one which would force a Franchise tax on those who choose not to incorporate. The Medical Society and Bar Association have requested a special exemption for this provision since a similar law does not exist in Maryland or Virginia.

We believe that physicians in the District of Columbia, as well as other professionals, should enjoy the same rights and privileges that our colleagues have everywhere else in this Nation, and that the present law unfavorably discriminates against us.

Your Society is doing everything it can to gather support for this measure.

Marvin C. Korengold

## CAMPBELL'S SOUPS IN DIABETIC DIETS*

### RECOMMENDATIONS FOR PLACING CAMPBELL'S SOUPS* INTO EXCHANGE LISTS

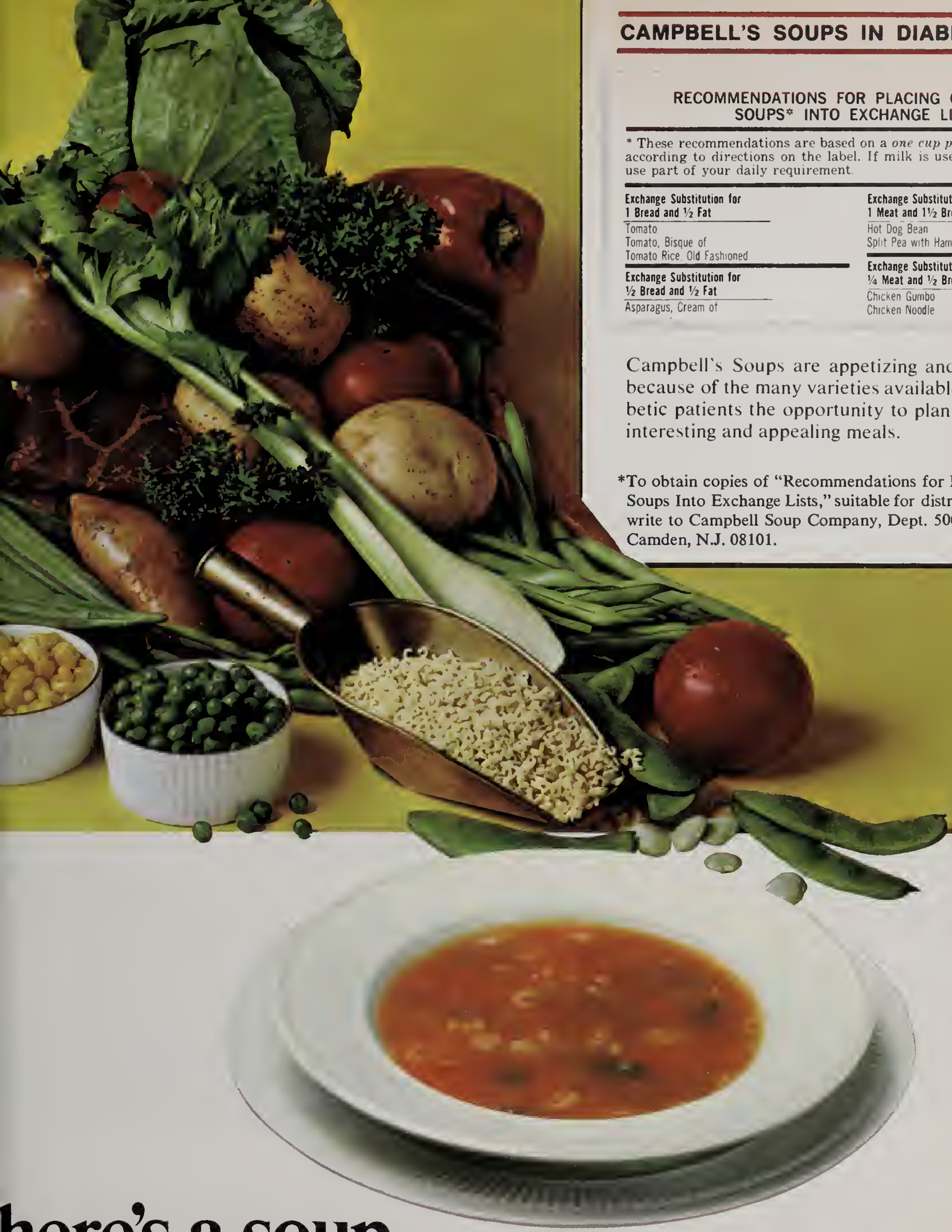
* These recommendations are based on a *one cup portion* when prepared according to directions on the label. If milk is used in the preparation, use part of your daily requirement.

| Exchange Substitution for 1 Bread and ½ Fat | Exchange Substitution for 1 Meat and 1½ Bread |
|---|---|
| Tomato | Hot Dog Bean |
| Tomato, Bisque of | Split Pea with Ham |
| Tomato Rice, Old Fashioned | |

| Exchange Substitution for ½ Bread and ½ Fat | Exchange Substitution for ¼ Meat and ½ Bread |
|---|---|
| Asparagus, Cream of | Chicken Gumbo |
| | Chicken Noodle |

Campbell's Soups are appetizing and enjoyable and, because of the many varieties available, offer your diabetic patients the opportunity to plan and enjoy more interesting and appealing meals.

*To obtain copies of "Recommendations for Placing Campbell's Soups Into Exchange Lists," suitable for distribution to patients, write to Campbell Soup Company, Dept. 500, Campbell Place, Camden, N.J. 08101.



An excerpt from the Searle series "The Ecology of Birth Control"*

# The Unwanted Child & Birth Control

## Ten thousand battered children– a growing medical problem?

In his daily practice the physician witnesses the human suffering caused by uncontrolled fertility. Perhaps one of its most tragic effects is the unwanted child, who so often experiences parental rejection. The rejected child in a family may be neglected, nagged and severely punished. Sometimes he is criminally abused. Child abuse is common enough to have become a separate clinical entity: the "battered child" syndrome. Reliable statistics are difficult to obtain, but it has been estimated that in this country alone roughly 10,000 children are "battered" per year, and their number may be increasing.

A revealing picture of child abuse patterns is provided by one study of the American Humane Society. More than half of the 662 children involved (all reported in newspapers within a single year) were less than 4 years of age. One fourth of the battered youngsters died; most of these deaths were of children less than 2 years of age. Fathers were more often guilty of child abuse than mothers, but sometimes both parents participated. The study indicated that battered children are not limited to any particular socioeconomic stratum.

***For the complete brochure, and others in the series as they appear, please write to Searle or ask your Searle representative.** Explored in the forthcoming issues will be the history of birth control, the influence of poverty, ethnic factors and marital status, its role in illness, its genetic implications and its effects on the emotional and behavioral life of the individual.

# Searle contributions to the science of contraception

## BOTH AVAILABLE IN 21- AND 28-PILL SCHEDULES

# Ovulen® · Demulen®

Each white tablet contains: ethynodiol diacetate 1 mg./mestranol 0.1 mg

Each white tablet contains: ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients

Demulen . . . for its low estrogen and Searle's progestin – or Ovulen . . . with its wide physician and patient acceptance. Both offer almost complete contraceptive effectiveness and a low incidence of side effects. Both with a choice of pill-taking schedules . . . simple Sunday-starting" and patient-proof Compack® tablet dispensers.

**Actions** – Ovulen and Demulen act to prevent ovulation by inhibiting the output f gonadotropins from the pituitary gland Ovulen and Demulen depress the out-ut of both the follicle-stimulating hormone (FSH) and the luteinizing ormone (LH).

**Special note** – Oral contraceptives have been marketed in the United States nce 1960. Reported pregnancy rates vary from product to product. The effec-veness of the sequential products appears to be somewhat lower than that of ne combination products Both types provide almost completely effective con-aception.

An increased risk of thromboembolic disease associated with the use of hor-ional contraceptives has now been shown in studies conducted in both Great ritain and the United States. Other risks, such as those of elevated blood ressure, liver disease and reduced tolerance to carbohydrates, have not been uantitated with precision

Long-term administration of both natural and synthetic estrogens in subpri-iate animal species in multiples of the human dose increases the frequency of ome animal carcinomas. These data cannot be transposed directly to man. ne possible carcinogenicity due to the estrogens can be neither affirmed nor efuted at this time. Close clinical surveillance of all women taking oral contra-eptives must be continued.

**Indication** – Ovulen and Demulen are indicated for oral contraception.

**Contraindications** – Patients with thrombophlebitis, thromboembolic disor-ers, cerebral apoplexy or a past history of these conditions, markedly impaired er function, known or suspected carcinoma of the breast, known or suspected strogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings** – The physician should be alert to the earliest manifestations of rombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary nbolism and retinal thrombosis). Should any of these occur or be suspected e drug should be discontinued immediately

Retrospective studies of morbidity and mortality conducted in Great Britain and udies of morbidity in the United States have shown a statistically significant ssociation between thrombophlebitis, pulmonary embolism, and cere-al thrombosis and embolism and the use of oral contraceptives. There have een three principal studies in Britain[1-3] leading to this conclusion, and one[4] in is country. The estimate of the relative risk of thromboembolism in the study by essey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United ates found a relative risk of 4.4, meaning that the users are several times as likely undergo thromboembolic disease without evident cause as nonusers. The nerican study also indicated that the risk did not persist after discontinuation of lministration, and that it was not enhanced by long-continued administration. ne American study was not designed to evaluate a difference between products. owever, the study suggested that there might be an increased risk of throm-embolic disease in users of sequential products. This risk cannot be quanti-ied, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or com-ete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. xamination reveals papilledema or retinal vascular lesions medication should withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demon-rated, it is recommended that for any patient who has missed two consecutive riods pregnancy should be ruled out before continuing the contraceptive regi-en. If the patient has not adhered to the prescribed schedule the possibility of egnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identi-d in the milk of mothers receiving these drugs. The long-range effect to the nurs-g infant cannot be determined at this time.

**Precautions** – The pretreatment and periodic physical examinations should clude special reference to the breasts and pelvic organs, including a Papani-laou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives** – A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

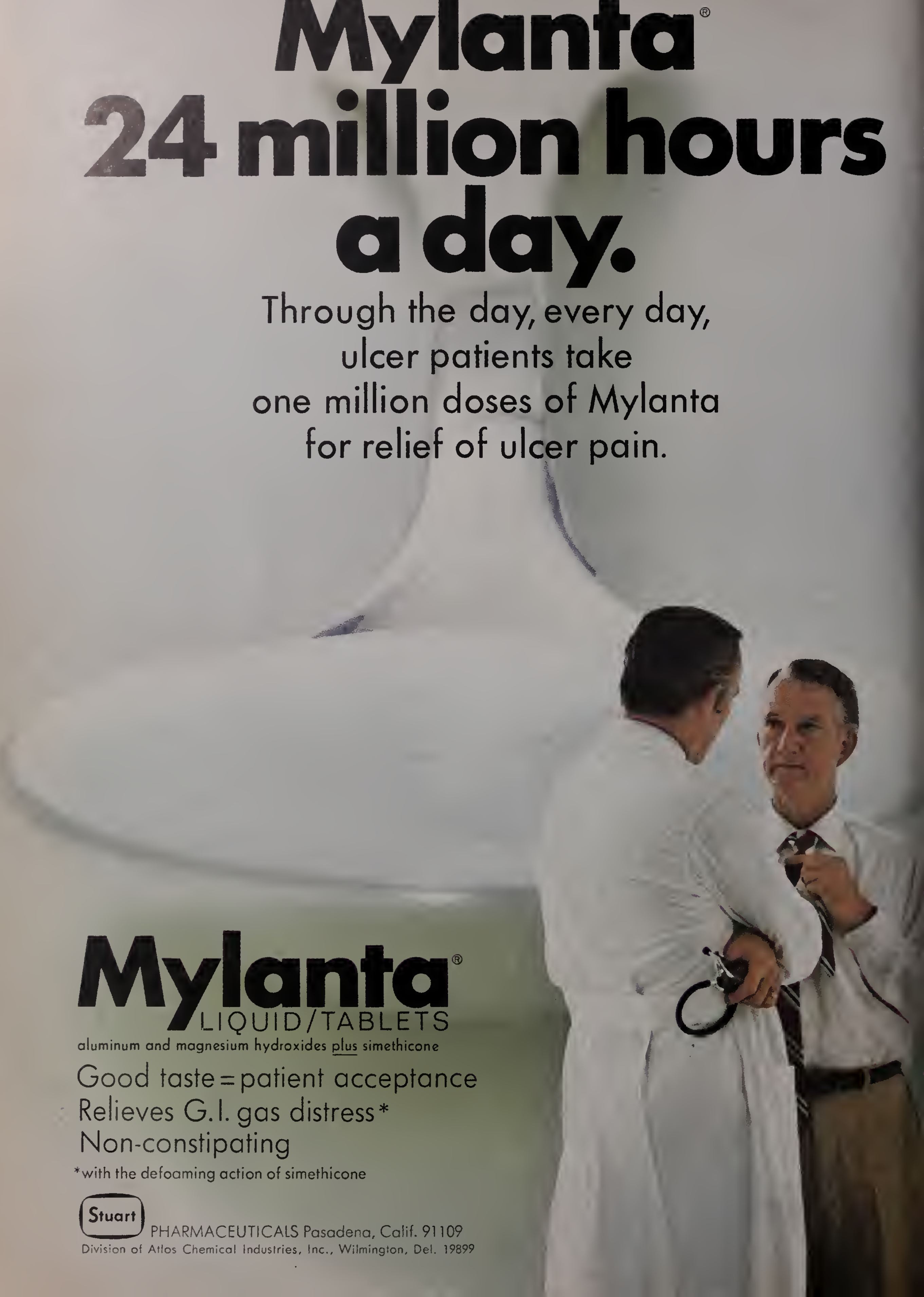
The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in $T^3$ uptake values; metyrapone test and pregnanediol determination.

**References: 1.** Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract *13*:267-279 (May) 1967. **2.** Inman, W. H W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969 **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969. 1A5

SEARLE Where "The Pill" Began
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680



# Mylanta®
# 24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

**Mylanta®**
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart
PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

mpirin® Compound with
odeine, gr. ½ or gr. 1

**lelps overpower pain**

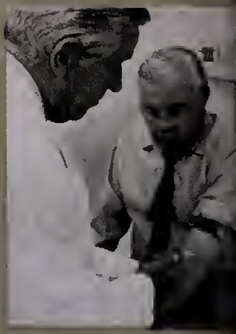
h tablet contains: aspirin gr. 3½,
nacetin gr. 2½, caffeine gr. ½.
3 contains codeine phosphate* (32.4 mg.) gr. ½.
4 contains codeine phosphate* (64.8 mg.) gr. 1.
rning—may be habit forming.)

Empirin Compound with Codeine is now classified in Schedule III.
Available on oral prescription and may be refilled 5 times
within 6 months, unless restricted by State law.
plete literature available on request from Professional Services Dept. PML.

Wellcome

**Burroughs Wellcome Co.**
**Research Triangle Park**
**North Carolina 27709**

*in stable adult diabetes, if diet alone fails...*



# start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

---

## *A Distinctive Oral Hypoglycemic*

---

# a biguanide... not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

# DBI®-TD
# (phenformin HCl)
timed-disintegration capsules 50 mg.

# lowers elevated blood sugar

**ow to prescribe DBI®-TD (phenformin HCl)**

**o start with DBI-TD**

| | |
|---|---|
| **Week 1** | 1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal. |
| **Week 2** | Continue effective DBI-TD dosage.<br>If necessary, add an additional capsule to the A.M. or P.M. dose. |
| **There-after** | Continue effective DBI-TD dosage. |

**To transfer from sulfonylurea therapy to DBI-TD alone:** The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

**To transfer from sulfonylurea therapy to combined therapy with DBI-TD:** The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

**dications:** Stable adult diabetes mellitus; sulfonylurea fail-
es, primary and secondary. **Contraindications:** Diabetes mel-
us that can be regulated by diet alone; juvenile diabetes that
uncomplicated and well regulated on insulin; acute compli-
tions of diabetes (metabolic acidosis, coma, infection, gan-
ene); surgery; severe hepatic disease; renal disease with
emia; cardiovascular collapse, after disease states associated
th hypoxemia. **Warning:** Use during pregnancy is to be avoided.
ntil adequate data on the effects of DBI on the human fetus
e available, such use can be considered experimental. **Pre-**
**utions: Starvation Ketosis,** which must be differentiated
om "insulin lack" ketosis, and is characterized by ketonuria
spite of relatively normal blood and urine sugar, may result
om excessive DBI therapy, excessive insulin reduction or
sufficient carbohydrate intake. Adjustment of DBI-TD or
sulin dosage, or supplying carbohydrates, alleviates this
ate. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING
OOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not rec-
mended in the presence of azotemia or in any clinical situa-
n that predisposes to sustained hypotension that could lead
lactic acidosis. To differentiate lactic acidosis from ketoacido-
, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331.** **Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV

# On formulary and in the pharmacy...

NDC 15-3503-20
KANTREX®
KANAMYCIN SULFATE
INJECTION
EQUIVALENT TO
1.0 Gm.
KANAMYCIN/3 ml.
Federal law prohibits
without prescription.
BRISTOL

take
advantage
of the
**Kantrex**®
**KANAMYCIN SULFATE**
experience

## A dozen years of Kantrex usage have established its efficacy, its versatility, its simplicity.

## And its economy.

Faced with a life-threatening infection, the physician cannot conscionably consider economy a primary factor in selection of an appropriate antibiotic. However, when susceptibility reports are in, the infecting pathogens are often found to be susceptible to several antibiotics. The physician may then consider dose requirements and cost in his prescribing decision.

Kantrex requires one simple standardized dose for almost any patient with any susceptible mixed Gram-negative/staph infection (Pseudomonas are resistant). The usual adult daily dose of Kantrex is only 1.0 Gm.…and the usual total course of therapy, 7-10 Gm. Translated to dollars and cents, the daily cost of Kantrex therapy may be only 1/2 to 1/8 that of therapy with other parenteral antibiotics used for serious hospital infections.

## Doesn't it make good sense to use Kantrex?

## Experience proves it does.

---

BRIEF SUMMARY OF PRESCRIBING INFORMATION
(8) 7/8/70
For complete information, consult Official Package Circular.

> **Warning**: Irreversible deafness can occur. Tinnitus or vertigo may also occur and indicate vestibular damage and impending deafness. The risk is sharply increased with renal dysfunction In such cases, decrease size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases Watch carefully for ototoxicity in older patients and patients receiving more than 15 Gm. of kanamycin. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in post-operative patients until recovery from anesthesia and muscle relaxants is complete. Avoid concurrent use of other ototoxic drugs including ethacrynic acid. Safety in pregnancy is not established

**Indications:** Serious infections due to susceptible strains of *E coli*, Proteus sp *Enterobacter aerogenes*, *K pneumoniae*, *Serratia marcescens* and *Mima-Herellea* Culture and sensitivity studies should be performed.
**Contraindications:** A history of hypersensitivity to the drug Prior auditory damage by kanamycin or other agents may be a contraindication if effective alternative therapy is available
**Precautions:** Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary – in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.
**Adverse Reactions:** Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias
**Dosage and Administration:** The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg /Kg / 12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours.

If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.
**Supplied:** Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. and 1.0 Gm. in 3 ml. Also available – Pediatric Injection 75 mg. in 2 ml.

**A.H.F.S. Category 8:12.28**

**BRISTOL**
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

# History of the Medical Society of the District of Columbia

## EPILOGUE

AFTER HAVING AGREED TO WRITE the history of the Medical Society of the District of Columbia during my tenure as Executive Director and Secretary-Treasurer I had serious misgivings. However, I had promised to undertake the task at the insistence of Dr. Wallace M. Yater with whom I have had such a long and pleasant association. And that was that!

One disturbing factor to me was the closeness of my service with the Medical Society. Since resigning from my position in 1962 not enough years had passed to give me the proper perspective of events during my 24 years as an official of the Society. Certainly I could not be as frank in some matters as I would be 25 or more years from now.

Then there was the matter of personalities. I am certain that many I have not mentioned are as worthy of recognition as those who have found their way into these pages. However, I could not avoid being selective because I have linked names to the events which seemed to me most important. I have also limited the history to the years 1938 to 1962.

No medical society executive enjoyed better and more wholehearted support than I did. The greatest privilege was my close relationship with many physicians. It was to me a most enjoyable experience. If my successors are as fortunate as I have been, they will have much to be thankful for.

## APPENDIX I

The following colloquy took place between Senator James E. Murray of Montana and Senator Robert A. Taft of Ohio and was published in the column "In and Out of Focus" which appeared in the May, 1946 issue of the Medical Annals of the District of Columbia. It indicated the heat that was generated by advocates and opponents of national medical-care legislation:

It all began when Senator Murray in his opening statement referred to an editorial which appeared in the *Washington Post* decrying the practice of condemning programs for full employment, veterans' housing, and health insurance as being communistic. The Senator observed it was "good advice to people not to be making charges that this measure (the Wagner-Murray-Dingell bill) is communistic." Senator Robert A. Taft of Ohio, a member of the Committee, took exception to this statement, whereupon Senator Murray became highly incensed. Here is what happened as reported in *The Washington Post.*

" 'Well, Mr. Chairman, if you're going to be partisan, I will too,' Taft remarked. 'I think this bill is socialistic . . .'

" 'Now you keep quiet,' Murray warned angrily.

" 'I think this bill is the most socialistic measure ever proposed seriously to the Congress.' Taft persisted. 'This committee is being run as a propaganda machine which will go on for a month . . .'

" 'That's a slander and a falsehood,' shouted Murray, Chairman of the Senate Committee on Education and Labor.

" 'You've shown your position,' Taft rejoined cooly. 'It's just a propaganda machine.'

" 'It's people like you who have ruined progressive legislation by calling it communistic,' Murray countered. 'The Communists don't deserve such kudos. You're just reflecting your general conduct on the Senate floor here.'

"Taft then asked permission to make a brief statement of his intention to submit an opposition health bill to the committee.

" 'I don't care what you want to introduce,' Murray said, rapping his gavel.

"Taft tried to continue, but the Chairman shouted him down.

"His dander up, the Republican Senator demanded to be heard.

" 'I demand you subside,' Murray yelled back, shaking his fist at Taft. 'You've been impertinent and insulting.'

" 'I intend to offer a complete bill . . .' Taft began again.

" 'I don't care what you intend to offer,' Murray told him. "You can shut your mouth up and get out. You're so self-opinionated and so self-important.'

" 'Mr. Chairman,' Taft interjected, "I move the committee adjourn until 10 a.m. tomorrow to give the chairman time to regain his temper.'

" 'No, said Murray. 'No, I won't adjourn. We'll go on as scheduled.'

"Taft turned to the official reporter, 'I hope you're getting all this, because I intend to take it to the floor.'

"Don't take it down,' Murray ordered the reporter.

" 'You mean the chairman refuses to take down statements I make?' Taft demanded.

"Senator H. Alexander Smith (R., N.J.) broke in to suggest that Taft be permitted to make his statement, but Murray refused.

" 'Shaking his fist at Taft, Murray shouted:

" 'I'm chairman of this committee and I want you to subside. If you don't shut up I'll get these officers in here to have you thrown out.'

"An elderly Capitol policeman standing by the door looked straight ahead into space in an effort to make himself invisible as he faced the prospect of being caught in the middle of a Senatorial fight.

"Some 50 or 60 spectators tittered, while a number of nuns interested in the legislation looked aghast.

"Taft jumped to his feet and started for the door. He turned and shouted back: 'I am leaving your committee and I shall not attend any more of its hearings. I think the country will know and the Senate will know that it is a completely one-sided, prejudiced, unfair committee.'

"Raging, Murray retorted: 'That's your general conduct, and you won't gain anything before the country by it. If you come in here and act like a statesman, all right. But you can't do that, no, you can't do that.' "

## APPENDIX II

The following members served in some branch of the Armed Forces in World War II. The list is compiled from names which appeared in the *Medical Annals of the District of Columbia*:

EPILOGUE 112

Theodore J. Abernethy
Arnold A. Albert
Victor R. Alfaro
Francis Allman
Harvey H. Ammerman
John J. Andrina
Ellis April
Walter Atkinson
Louis B. Bachrach
William E. Bageant
George L. Ball
John G. Ball
Henry L. Bastien
E. Herbert Bausersfeld
William H. Beard
Joseph F. Belair
Robert A. Bier
Morris I. Bierman
William K. Billingsley, Jr.
Montgomery Blair, Jr.
Abe Blajwas
Robert M. Bolton
Daniel L. Borden
Thomas Bradley
Crenshaw D. Briggs
Alfred E. Brigulio
Brooks G. Brown, Jr.
Peter P. Brue
Percy A. Bryant
Warren B. Burch
Everett S. Caldemeyer
C. Willard Camalier, Jr.
John L. Cardwell
Richard B. Castell
Ralph M. Caulk
John R. Cavanagh
Frank T. Cawley
Ervin N. Chapman
Morris Chase
William D. Chase
William W. Chase
Austin B. Chinn
Thomas A. Christensen
David S. Clayman
Charles S. Coakley
Milton C. Cobey
Robert J. Coffey
Roger S. Cohen
Francis T. Coleman
Arthur G. Compton
John L. Conley
Aloysius J. B. Connally
Linn F. Cooper
Karl C. Corley
Darrell C. Crain
Robert B. Crichton
George H. Crofton
J. Keith Cromer
Allen S. Cross
Ralph Crowley
Horace H. Custis, Jr.
Louis Eugene Daily
Edmund F. Daley
Worth B. Daniels
Alva D. Daughton
Alfred A. J. Den
Jack L. Derzavis
Robert H. Detwiler
Michael P. De Vito
George Dewey
Arthur Dick
Samuel Diener
Mazarin C. Dollman
John F. Dominick
John F. Donohue
Harold R. Downey
Clayton B. Ethridge
George R. Farrell
Irvin Feldman
Max E. Feldman
Charles E. Fierst
Harold Y. Finck
John F. Finnegan
Harry M. Fletcher
Theodore C. C. Fong
Stuart O. Foster
Wesley Fry
Elmer W. Fugitt
O. Hugh Fulcher
Perry W. Gard
Edward T. Gary
Frank B. Geibel
James H. Gillen
Nathan Glaubach
Mervin W. Glover
Alfred Golden
Edward J. Grass
A. Clagett Gray

Luther W. Gray
James N. Greear
Milton M. Greenberg
Henry A. Grennan
Henry B. Gwynn
Alexander Halperin
John E. Hanby
J. Phelps Hand
Irvin Hantman
Malcolm D. Harrison
Clarence R. Hartman
Stafford W. Hawken
Ralph J. Haws
Eugene W. Higgins
Clayton H. Hixson
David F. Hodge
Herman S. Hoffman
Jay L. Hoffman
Raymond T. Holden
Saul Holtzman
Gerald A. Hopkins
Edmund Horgan
Henry A. Hornthal
William A. Howard
William J. P. Howard
Charles R. Hughes
Camp S. Huntington
Donald W. Ingham
R. Lee Jackson
Bernard L. Jarman
William D. Jarman
John H. Judson
Howard F. Kane
Howard Katzman
Edward A. Kelly
John A. Kennedy
Allan E. King
Elmer Klein
Morris Kleinerman
Ben Klotz
Don S. Knowlton
Stephen E. Kramer
Edward A. Krause
Harvey F. Kreuzberg
Henry T. Kulesher
Benjamin P. Lafsky
Zigmond M. Lebensohn
Donald H. Leeper
Sydney Leventhal

Stuart W. Lippincott
Philip Litvin
James M. Loftus
John Louzan
Henry M. Lowden
Eugene L. Lyddane
Daniel F. Lynch
John Hugh Lyons
Leslie K. MacClatchie
Wilkins R. Manning
Raymond Maret
George V. Martin
Thomas E. Mattingly
Lee McCarthy
Francis N. McDonald
Hector C. McKnew
Marvin M. McLean
Russel McNitt
Albert E. Meisenbach
William C. Meloy
Matthew Mendelsohn
Ernest Michaelson
Clarence L. Miller
William S. Miller
Laurence C. Milstead
John Minor
Ferdinand H. Mistretta
Reginald H. Mitchell
Henry A. Monat
Joseph M. Moore
Edward C. Morse
L. Conner Moss
Arthur Mourot
Benjamin J. Mundell
Joseph J. Mundell
Raymond W. Murray
Arthur Nachlas
Edward W. Nicklas
Bernard E. Nunez
Paul J. O'Donnell
John A. O'Donoghue
James A. O'Keeffe
Harry B. Orleans
Mortimer Ostow
Albert E. Pagan
John H. Peacock
Jed Williams Pearson, Jr.
Philip O. Pelland
Ivy A. Pelzman

William Raffel
Walter Rapaport
Thomas J. Ready
Clyde P. Reeves
George W. Reeves
John A. Reisinger
George A. Resta
Alfred H. Richwine
William S. Ritchie
Murray W. Robinson
Walter J. Romejko
Marshall deG. Ruffin
George W. Russell
Charles P. Ryland
William A. Ryon
Hilbert S. Sabin
Warren W. Sager
I. Lewis Sandler
John T. Schnebly
Leo V. Schneider
Raymond L. Schwartz
Saul Schwartzbach
Leon Seley
Maurice Selinger
Hyman D. Shapiro
S. Hazen Shea
Isidore Shulman
Samuel Shwartz
Carl Silverman
Morris Silverman
George V. Simpson
Robert L. Simpson
John B. Smith
Luther H. Snyder
Daniel Sondheimer
William G. Sorrell
Richard H. Spire
Philip A. E. Stebbing
Joseph W. Stein
Walter Stokes
Joseph D. Stout
Samuel J. Sugar
Albert J. Sullivan
John C. Sullivan
Alfred J. Suraci
James M. Suter
Daniel F. Suttenfield
John A. Swartwout
S. Ross Taggart
Robert G. Taylor
John W. Thomas
J. Lawn Thompson, Jr.
Francis D. Threadgill
William J. Tobin
George Tolstoi
Frank H. Towner
John W. Trenis
Maurice van Kinsbergen
Philip H. Varner
Charles P. Waite
Joseph J. Wallace
Simon Weiner
Harry S. Weitzman
G. Louis Weller, Jr.
Albert M. Wheeler
Eugene L. Willard
T. Frasier Williams
Paul R. Wilner
Alfred Wilson
William A. Withers
J. Rogers Young

## APPENDIX III

Thomas R. Henry was War Correspondent for *The Washington Star* with the First U. S. Army in Germany. The following dispatch created much feeling when it appeared in *The Star* on April 24, 1945. Mr. Henry said, “This is a personal message to my good friends in the District of Columbia Medical Society.”

With the 1st Army in Germany, April 23 (Delayed). Today I visited the Buchenwald prison camp. I visited the castration ward. I was in the hanging chamber. I saw the typhus experimental clinic.

In Washington three months ago skeptics asked me, "Did you ever see a Nazi atrocity?" The answer is now double yes! I've seen Buchenwald.

It is near Weimar, the town of Goethe, Schiller, and the first German republic. Three miles out of town is this terrible Buchenwald. Here Nazi physicians–shame on the name of medicine–infected human beings with typhus and killed a few each day to determine the day-after-day effect on the liver, kidneys, and the heart muscles. Here they castrated men.

A few miles away in the women's concentration camp they removed ovaries. They transplanted the female glands to the male and the male to the female to determine what makes sex–can a woman be made a man, a man made a woman.

Two years ago in England I waited in the night for the return of the first Canadian bombers from a mission to Essen. The first man to leave the plane was a French Canadian. He said, "The good Lord, Jesus, how does he allow things like this?"

My reaction today was Lord Salisbury's letterhead: "Lord Jesus come quickly."

More than a week ago American troops first entered the concentration camp at Buchenwald. They found 21,000 starving, 3,000 at the point of death. For the first few days, despite all remedies, the death rate was 100 a day. They could not hold even water on the stomachs. The only possible way to save lives was by transfusion of blood.

Now, says Colonel William Williams, former professor of physiology at the University of Texas and later a prominent physician in Austin, the death rate has been cut to 30 a day largely due to transfusions.

Buchenwald is one of the great concentration camps, better than most, say the immates. There is no logic to it. There is no logic to anything Nazi. Men were brought here to work in the V-2 rocket bomb factory, but by deliberate policy were starved to death.

The death quota was 80 each day. If 80 did not die from starvation, the remainder of the 80 were killed. The weakest were offered a choice–death by an injection of formalin in the veins or hanging themselves with the aid of SS men, who would mercifully club out their brains if they kicked too much at the end of the rope, so that their suffering from choking was not too prolonged.

I have seen roads littered with the rotting bodies of our own poor boys in Normandy. Still I can't attempt to describe Buchenwald–even a week after.

Lots of reporters came to Buchenwald before me. I went there today intending to write a cold scientific story on wholesale starvation. But Maj. Joseph Andriola of New York took me through the children's ward set up by the Army Medical Corps and into the castration ward where 3,000 men were castrated in the last few months–and somehow science seems far away.

When Colonel Williams took over Buchenwald he found 3,000 dying. He estimated that it would require 30 days without food and only occasional sips of water to bring a healthy adult man to such a condition. I found living corpses on the floors. "Looking in their eyes is like looking into a puddle of muddy water," said the Colonel.

Even a glucose injection in the veins was too much of a strain for the dying. Their condition was like shock after an operation. The former physiology professor calculated what blood was needed. He calculated the elements of food for keeping a man alive primarily to make blood. So the poor devils within a few minutes of death by starvation were given a pint of whole blood donated by people in England and America.

He feared that to give them more than a pint would cause convulsions. The effects were remarkable. Living corpses in a few hours became alive.

I saw a man today—skin drawn over bones. Twenty American doctors are working day and night to keep the poor devils alive, especially the children, mostly Polish Jews whose parents were executed in the gas chambers. One 12-year-old was called "Gangster" because he boasted that his uncle is a member of the Capone gang in Chicago.

I entered this camp with 2 woman reporters. I was taken alone through the castration ward where 30 men recently operated on said they were due for gas-chamber deaths in a few days when the Americans came. They had served the purpose of sex experiments of a crazy Nazi doctor.

I was taken to the hanging chamber. There was no gallows. A man who preferred this type of death was allowed to put the noose around his own neck. He was then pulled up and choked to death.

I was told the formalin vein injection brought on a very painful death and that most of the victims preferred hanging themselves. In the walls behind the noose were marks of fingernails where hanging men had scratched in death agony before the clubbing.

As for typhus experiments, said Colonel Williams, "I don't think I will ever want to experiment with dogs again. At the University of Texas we used to do that, but then we would kill them with an ether injection in the veins. It seems so different when I see men used the same way."

One good thing about Buchenwald—800 children seemed in fair physical condition due to the fact that their elders had given them all the food possible and a child needs less. They were playing games when we entered the building, like children on Washington street corners.

Among the prisoners were 60 Polish, French and Russian doctors. They said the job was hopeless since the starving were beyond taking even the simplest treatment. It was hoped that the typhus experiments with human rabbits might have some value, but all the records were destroyed. Good friends of the District Medical Society, I hope you have a little confidence in me. Please believe my story on Buchenwald. I have tried to understate. My last reaction was, "Lord Jesus, come quickly."

## References

American Medical Association: Digest of Official Actions, 1846-1958.
American Medical Association: Supplement to Official Actions, 1959-1963.
BUSEY, S. C.: Personal Reminiscences and Recollections, Washington, D.C., 1895.
BUSEY, S. C.: A Souvenir, Washington, D.C., 1896.
COBB, W. M.: The First Negro Medical Society. Washington, D.C.: The Associated Publishers, 1939.
GREEN, C. M.: Washington—Village and Capital 1800-1878. Princeton, N.J.: Princeton University Press, 1962.
LAMB, D. S.: History of the Medical Society of the District of Columbia 1817-1909. Washington D.C., 1909.

Medical Annals of the District of Columbia, Volumes VII to XXXI (1938-1962).

Medical Care of the American People: The Final Report of the Committee on the Costs of Medical Care. Chicago: University of Chicago Press, 1932.

National Health Conference, Proceedings of July 18-20, 1938, Washington, D.C.

NICHOLS, J. B.: History of the Medical Society of the District of Columbia, Part II. Washington, D.C., 1947.

Selective Service System: Physical Examination of Selective Service Registrants. Special Monograph No. 15, 1947.

United States of America, Appellants, vs. The American Medical Association, A Corporation; The Medical Society of the District of Columbia, A Corporation; The Harris County (Texas) Medical Society, An Association, et. al., Appellees. (A reprint of the official documents with a condensation of the trial.) Chicago: American Medical Association, 1941.

# Editorials

## REBEL WITH A CAUSE

The recent public agonizing over selection of a Medical Director for D.C. General Hospital symbolizes the crisis of leadership that has plagued this central health facility for too many years. The resolution of this vexatious problem, as with many problems, may be found in retrospective analysis of history. Scholars have reiterated "study the past"—and "past is prologue". These admonitions are particularly germane when one studies the exacting requirements for success in this most onerous and thankless job. The man for the job should be another Joe Fazekas—tough, single-minded, perceptive. Joe Fazekas was such—as well as pugnacious, forthright, and tenacious.

I speak authoritatively, as well as feelingly, since I knew him from the time we started our graduate training together in this city. He promptly endeared himself to me by earning the disfavor of the same individuals that I did. This, of course, showed discernment, and as I have stated elsewhere, a mature adult may be as proud of his enemies as he is of his friends. Dr. Fazekas had collected scores of both, and I believe he secretly enjoyed the enmity of some as much as he enjoyed the admiration of his friends. But no conscientious public servant could have accomplished the reorganization of Gallinger Municipal Hospital without inspiring the envy and hostility of carping and meretricious critics. And only an imaginative and audacious temperament could have accepted and met the challenge of Gallinger Hospital. The inadequacies, the sub-standard practices, and the organizational chaos had been for a long time a grim reflection on the entire community. The multiplicity of the insurmountable problems, long inherent in this sprawling, unkempt and neglected corner of the District is reminiscent of another nearly identical institution which, through the genius and energy of one man was transformed into a renowned model of superior medical care, and a magnificent center of teaching and research. I have reference to the famous Salpetriere of Paris, a motley scramble of people housed inadequately in forsaken quarters. It was called the "Grand Asylum of Human Misery". But within 8 years it was changed almost single-handedly by one man—Charcot. It took Dr. Fazekas 10 years to accomplish the same, but otherwise the parallel is uncanny.

One of the most chronic and vexatious problems at D.C. General had been the inadequacy, quantitatively and qualitatively, of the personnel. Joe set about vigoriously to correct this and by a combination of cajolery and intimidation was able to counsel and conciliate the many doctors with their many loyalties into a firmly fused family of co-workers and to effect the synthesis of the small partisan bands of combatants sniping at each other. It would be a badly mixed metaphor to say that he brought peace and brotherhood to D.C. General by beating swords into plough shares, but it is accurate to state that he beat some heads together. The heat of fusion was such that it caused a rosy glow over the Southeast that on a clear night could be seen as far away as Congressman McMillan's office on Capitol Hill.

It is difficult to single out the most important among the many substantial contributions that Dr. Fazekas made. No doubt one of these would be his establishment of a medical outpatient department. It is difficult to realize that before he came, there was none and patients were either admitted or sent on without further care or follow-up. This of course had limited the level of medical care and teaching resources. Furthermore, it was costly and wasteful, not only in terms of human values but even from a fiscal point of view. For example, hundreds of patients per year would be admitted in diabetic coma. Following their successful treatment, they would be discharged only to be re-admitted and the expensive work-up repeated—this ritual recurring with bootless regularity.

Charcot also organized an outpatient department when in 1882 he was appointed Professor of Clinical Diseases of the Nervous System at the Salpetriere. He was able to say in his inaugural lecture, "An outpatient department has just been added to our service and, in addition to the inpatient service . . . this makes an ensemble in which the parts are logically linked and which will round out the other services of the hospital". Charcot went on to state that, "We are richly endowed with all the essential equipment for the practice of electro-diagnosis and electro-therapy". Dr. Fazekas established a laboratory of electroencephalography and a radioisoptope laboratory. Professor Charcot established a department of neuropathology which, he stated, "had achieved an autonomy among the other specialized medical disciplines which like it, by force of circumstance, were weaned from the breast of general medicine."

At D.C. General a department of neuropathology under Dr. Weiss, was established.

Dr. Fazekas, like Professor Charcot, insisted on the inseparable triad of research, teaching, and good medical care. Dr. Charcot established the first research laboratory at the Salpetriere, and in similar fashion Dr. Fazekas developed an aggressive program of research, which included 18 different research laboratories, all on a full-time basis. His bibliography included over 200 published articles, many in collaboration with residents and students. I fortunately had the experience of collaborating on research with Dr. Fazekas and found it an edifying experience as many others had.

All of us were impressed with Dr. Fazekas' sense of community responsibility which, unfortunately, did not always earn him the recognition and respect that one would expect. The contrary had often been the reward for his labors, but this seems to be an occupational hazard. Because of his forthright position, Charcot, too, invoked the enmity of his critics; and newspaper reporters accused Charcot of ignorance, incompetence, partiality, and even of having been bribed. In 1 newspaper article Dr. Fazekas was labeled a "Hungarian Rebel". When Dr. Fazekas' ancestors adopted their surname, which as any educated neurologist knows means "pot-fixer", the choice could hardly have been more prophetic. While scientific advances in metallurgy have rendered the utensil-patching craft archaic, mending bodies and organizational differences is still an increasingly useful art. In this regard, the transition from pots to people, while fortuitous, was also fortunate. The D.C. General needs another "pot-fixer".

Dr. Fazekas had never retreated in the face of criticism or even calumny. He showed an amazing resilience as well as versatility in defending his position, promoting his programs of better medical care and research, designing and implementing investigations over a broad front, protecting and promoting the welfare of his colleagues and staff, and skillfully resolving the personal differences and organizational 'bottle necks'. These multiple spheres of vigorous activity, of necessity, caused many random collisions with more inert particles. The impact was sometimes painful.

His contributions, in his 10 years of leadership at D.C. General Hospital, stand as an historical event in this community and compare to a similar transformation of the Salpetriere in Paris. And what was said of Charcot could be said of him, "he was a man of very high intellectual and moral fiber, a teacher of exceptional qualities, and a creative scientist".

HAROLD STEVENS, PH.D., M.D.
*Professor of Neurology*
*The George Washington University*

## REPORT OF THE DELEGATES TO THE A.M.A.

The recent meeting of the House of Delegates in Atlantic City resulted in consideration of 158 items of business including 104 resolutions. The speech of President Richard Nixon was marked by a challenge to the physicians of this country to deal with the physical, mental, and moral health of the country. The bulk of this challenge was directed toward the drug abuse problem and, the A.M.A. Board of Trustees in nationwide newspaper advertisements accepted the challenge.

The House of Delegates elaborated its right of all persons to have access to adequate medical care but pointed out the need of people and the community to seek this care. Drugs and drug abuse captured much attention in the House of Delegates with the predominant theme being better education of people, increased emphasis on proper medical indications for the use of drugs on part of physicians, and closer observance of the manufacture and distribution of drugs of all types. Peer review and its use came in for intensive study and debate with emphasis on the review being a professional function while definitions of Claims Review, Peer Review, and Medical Practice Analysis were adopted. Support of the House Officers and Medical Students both by increased financial aid including Federal funds and by support of training programs in community hospitals was voted. The studies on Health Manpower and on Professional Liability were received for study.

The Medical Society of the District of Columbia saw Raymond Holden, M.D. re-elected to the Board of Trustees of the A.M.A. and one of the delegates, C. Willard Camalier, Jr., M.D. elected to the Council on Medical Services which is concerned with the programs of financing and delivery of health care.

Respectfully submitted,
John J. Hughes, M.D.
C. Willard Camalier, Jr., M.D.
*Delegates to the A.M.A.*

# D.C. MENTAL HEALTH ADMINISTRATION

## Mobile Mental Health Units

It has been demonstrated repeatedly that the individual or family in need of mental health services rarely seeks help until both the situation and the patient's functioning has reached a stage where hospitalization and disruption of the home is frequently inevitable. In answer to this need, the Mental Health Administration proposes a new approach to the delivery of emergency psychiatric services within the community, through the use of mobile teams to provide on-site delivery of services on a twenty-four hour, seven day a week basis.

Dr. Hans Selye enumerates four stages of the stress syndrome which might be alleviated by the existence of a mental health team at the neighborhood street corner. Stage one occurs when an individual meets with frustration in attempts to meet his basic psychological or physiological needs. His typical reaction to this is to try meeting the needs with the various methods he has found successful in the past. He runs the gamut of his usual role repertoire, in other words, if the need continues unmet, he enters stage two of the stress syndrome. He now feels anxiety and a tinge of fear. His reaction is to try any method that he can think of that has a chance of meeting the deprived need, no matter how slight the chance may seem. He will try new methods such as visiting a variety of community agencies.

For many reasons, many persons do not think of Mental Health Agencies as being appropriate to their needs at this point, or perhaps they are not aware of some of the services that are available. For example, if the stress is initiated because they cannot pay their rent and are being evicted, they probably will not call the Mental Health Administration. If a child is on drugs, failing in school or violating parole, the family will probably not call the Mental Health Administration. They perceive the Administration to be an irrelevant group of offices in terms of their precipitating problem.

If needs cannot be met with all logical methods of attack, the stress increases measurably and the individual enter into stress stage three. His mental health is now seriously jeapordized. Earlier anxiety is replaced by gripping fear. All task oriented measures cease, and his behavior is no longer geared to meeting the threatened need, or if so it would not be apparent to the average observer. His activity level goes up and he tends to engage in ego-supportive, mutually antagonistic behaviors. He now gets into fights with his neighbors over wrongs supposedly done to him or members of his family. He may break into stores whose prices have supposedly cheated him. He gets easily insulted by off-hand remarks and brings out a knife or even a gun.

**Essex C. Noel III, M.D. accepting delivery of Mental Health Emergency Vehicles from Mr. Earl Tasco, Administrative Services Division. Looking on are Dr. Roger Peele and Mrs. Phyllis Clemmons.**

Neither he nor the bystander knows what is "bugging" him but now he is interferring significantly with the lives of others. Members of the family or neighbors may well call a mental health agency at this point due to their concern over the unusual behavior of the person. Unfortunately, the person, having become ego protective already, is not willing to submit himself to any agency for help. Furthermore, his task-oriented behavior having ceased, he is unlikely to admit himself for such help on his own volition.

In stage four, the behavior rate decreases to near zero. The patient is psychologically and physically in a profoundly depressed state. He cannot marshall remaining energies to accomplish goal-directed tasks of any sort. He is now, or will soon be psychotic or may die, perhaps at his own hands.

With the availability of a twenty-four hour mobile service we believe the trauma for individuals and their families at all stages of the stress syndrome can be alleviated. The advantages of such a service delivery system are anticipated as follows:

1. *Response to Community Need.* Experience has

shown that there are frequent calls from the community requesting on-site services in psychiatric emergencies. On many occasions, family members, concerned citizens, or other community representatives call with the information that a patient currently on MHA roles has decompensated, lost his internal controls, or is displaying bizarre or acting out behavior. In the past, it has been necessary to instruct these persons to contact the Metropolitan Police Department to detain the patient and provide him with transportation to the appropriate psychiatric facility. In most cases the handling of the emergency by the police does not meet the standards which could be demonstrated by trained psychiatric teams. In addition, the police are prone to utilize those systems of restraint which they have found effective and to which they are limited. It is considered much more humane if skilled, trained staff could handle these disturbed persons.

2. *Immediate Treatment.* In many instances, initial medication and calming of the patient can be effectively performed on the scene. This is felt to be important, not only for more rapid treatment, but for continuity of care and involvement of the mental health team in the resolution of the crisis situation. The patient may further benefit from the realization that the team is sufficiently concerned and cares enough to come to them in their moment of need, thus laying the groundwork for more effective relations in the therapeutic process.

Police will not be used except as screening and evaluating agents, and in cases where police escort is required. They will be instructed to call for our services when the need for services is clearly indicated. The Mental Health Administration stresses the illogic and inhumanity of having police bring mentally disturbed patients to the psychiatric facility. We maintain that using police is inconsistent with the rhetoric of psychiatric problems as a form of illness. The use of handcuffs and other physical restraints is frequently averted through the skills of mental health workers, psychiatrists, and their therapeutic armamentarium.

3. *Information at the Site of Crisis.* It is anticipated that the team staff will become aware that a more accurate picture of the crisis can be obtained at the scene rather than in the emergency room or admitting office from second or third-hand accounts. A more detailed picture of the events contributing to the crisis or precipitation of the episode might be obtained. In addition, the environment in which the patient has developed his crisis may be studied and evaluated.

4. *Decrease in Number of Admissions and Admitting Office Patient Load.* It is expected that a substantial number of emergency cases treated on the scene will be immediate dispositions, that is, they may be treated adequately there or referred directly to the appropriate program. Reports will be prepared on each case seen, filed centrally, and a copy forwarded to the referral program after the patient has appeared.

5. *Non-Emergency Mental Health Problems.* The vehicle can be used to transport mental health workers to the homes of persons exhibiting disturbed or disturbing behavior, but are not in acute crises or presenting an emergency. Many of these individuals rejecting care in a clinical setting will welcome mental health workers in their homes. The primary responsibility is in assisting the individual as well as the "family crises" to assess the current mental health state and to aid through consultation and perhaps medication for symptom and anxiety relief. In addition, the vehicle can be used for transportation of patients between various MHA facilities.

6. *Adjunctive and Supportive Role to SPEMHCS.* The Suicide Prevention and Emergency Mental Health Consultation Service at 801 N. Capitol St., N. E., is a key 24-hour emergency function of the Mental Health Administration, and will have authority to activate and dispatch the mobile units in response to their evaluation of crisis situations. The vehicles will be based at the four (4) CMHC Centers, and will be manned by existing Admitting Office staff, with additional staff assigned from in-patient screening teams as designated. It is not anticipated that full-time positions will be developed for the mobile units, rather, the vehicles will be available to provide staff with mobility. Staff will be expanded in accordance with demonstrated needs.

To summarize, we strongly believe that the new mobile units will meet many needs that have hither to been neglected. Services will be brought to the patients in greatest need but because of the vicissitudes of the stress mechanics are least likely to come to a mental health center for help. Beginning stress situations can in many instances be either solved or considerably mitigated. Information as to the factors of the stress situation can be more readily observed and valuable material for patient program planning can be obtained. Should the patient need hospitalization, his admission can be expedited and facilitated thus reducing the anxiety of both patient and his family. Without doubt, many other important needs will be found that can be met by the availability of these mobile units, for if their existence is a sign of innovation in the District's Mental Health Administration Program, innovation is the key to understanding the methods in which we plan to press them into service.

ESSEX C. NOEL III, M.D.
*Director, D.C. Mental Health Administration*

# ►D.C. HEALTH NOTES

## Health Services in the Community

In its continuing endeavor to bring medical services to the people in their own communities, the Community Health Services Administration has opened the Adams-Morgan Neighborhood Health Center with a bi-lingual staff and has offered dental health care in a mobile unit to the people of the Northeast area.

During July and August, in a pilot project, staff members of the Bureau of Dental Health offered free dental health care to the children of the Richardson community in the Northeast section of the city.

The first dental service of its kind in the National Capital Area, dental health services were provided in a mobile trailer staffed by a dentist, dental hygienist, and two dental assistants. Hundreds of children of the area utilized the services, consisting of oral examinations, X-rays, cleaning the teeth, fillings, extractions, and dental health education.

The mobile trailer brought dental services directly to the community and was intended to encourage wider use of dental facilities during the summer months.

Parked on the grounds of Richardson Community School at 54th and Blaine Streets, N.E., the dental trailer was open daily Monday through Friday from 8:15 a.m. to 4:45 p.m. Clinic-eligible school children and adults made appointments for dental care by visiting the trailer directly. The area in which the trailer was parked is a high density low-income neighborhood.

The Mobile dental clinic was operated during the two summer months without additional funding, using its present staff from other dental clinics. Dr. Clivius Johnson, D.D.S. Community Health Services Administration dentist, was in charge of the dental clinic. Assisting Dr. Johnson were Yvonne Smith, dental hygienist, Mrs. Bonnie Lyles and Joe Aleardi, dental assistants. Mr. Aleardi is a sophomore at the Georgetown University School of Dentistry.

The trailer was well-equipped with essential supplies, two dental chairs, X-ray machines, sterilizer and other equipment. It was air-conditioned and electrically-lighted. Water and electric power were provided through the courtesy of the District of Columbia Board of Education.

The Adams-Morgan Neighborhood Health Center is located in an area composed largely of Spanish-speaking people. It is located in the People's Center at 2330 17th Street, N.W. With a bi-lingual staff, the new Health Center provides clinics for children and adults offering a wide range of free medical services for the indigent, including general medicine, gynecology, pre-natal and post-natal care, and family planning. It serves an area of about 20,000 people.

The Health Center is a cooperative effort of the Community Health Services Administration, the local community, and two private hospitals—Freedmen's and Childrens.

Staffed by the Community Health Services Administration, the medical team includes a physician, gynecologist-obstetrician, nurses, nutritionist, social worker, health aides, and clerks.

Freedmen's Hospital staff operates the Family Planning Service, which includes counseling on all aspects of family planning. The Clinic also offers a referral service for supplemental foods, medicaid, food stamps, clothing and housing.

The Children's Clinic, operated by Children's Hospital, offers a walk-in clinic primarily for emergencies and an appointment clinic. A pre-natal clinic for girls under 18 years of age is available.

The pre-natal clinic provides services for girls under 18 years age, usually between 11 and 17. The initial examination is given by appointment and is available without parental permission. When the decision is made to use the pre-natal services, a girl must obtain her parent's permission.

An obstetrician from the staff of George Washington University Hospital heads the pre-natal clinic staff and arrangements are made for the girls to deliver at that hospital. Assisting the obstetrician are a psychologist, nutritionist, and social worker. Following delivery, there is a period of up to three months of post-natal follow-up. During this period, the nurse and social worker visit with the new mother and child and assist with any physical or social problem.

A nutritionist counsels on good nutrition and diets. She plans low and high protein diets to assist overweight and underweight children. Special diets for sick children are available.

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*Associate Director, Department*
*of Human Resources*

**HEALTH AUTO-DATA, INC.**
4900 Massachusetts Avenue, N.W.
Washington, D.C. 20016
(202) 966–4300

*Serving the Physician
and the Community*

Health Auto-Data, Inc. (HAD), is organized to provide services to physicians to assist them in their daily routines.

Overhead cost may be reduced by having routine work done at the HAD facility.

We prepare a ''patient profile'' which may save a considerable amount of time. By having selected tests performed and a medical history taken prior to the physician's initial consultation with the patient, the physician finds it easier and less time-consuming to review the patient's history and analyze the test results.

The medical history is self-administered by patients utilizing an automated console. It passively teaches the patient how to report to a physician, again resulting in a time saving for the physician.

Several semi-automated physiological and laboratory tests are performed.

The entire patient-testing procedure only lasts about an hour and a half! HAD does not interpret the tests. HAD concentrates on the efficient and low-cost performance of routine tests.

The computer-printed reports - - with annotations by the patient's physician - - can serve as records to enclose when making referrals. The records with added diagnosis and recommendations can provide a full report when admitting a patient to a hospital. With progress notes regarding hospital treatment and disposition, the material provides the basis for a hospital summary.

Appointments for patients may be made at the patients' convenience. Call 966–4300 for further information or clip out this form and mail to:

HEALTH AUTO–DATA, INC.
4900 MASSACHUSETTS AVENUE, N.W.
WASHINGTON, D.C. 20016

FROM: DR.____________________________

STREET ADDRESS____________________________

CITY ____________________ STATE________

ZIP CODE ____________________

TELEPHONE NUMBER____________________

☐ SEND LISTING OF SERVICES AND FEES

☐ HAVE A REPRESENTATIVE CALL FOR APPOINTMENT TO EXPLAIN SERVICES

☐ I AM INTERESTED IN A FIRST-HAND INSPECTION OF H A D - - CALL ME TO ARRANGE A VISIT

☐ I AM INTERESTED IN BEING PROCESSED THROUGH H A D FACILITY - - CALL ME TO ARRANGE AN APPOINTMENT SO I CAN INCLUDE YOUR SERIES OF TESTS IN MY ANNUAL PHYSICAL EXAMINATION. I UNDERSTAND THIS IS COMPLIMENTARY

DARVON®
COMPOUND-65
65 mg. propoxyphene hydrochloride, 227 mg.
aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine
Lilly
H06
Lilly
H06

Additional information available to the profession on request.
**Eli Lilly and Company • Indianapolis, Indiana 46206**

Lilly

101488

gastritis

# vhen
# G-I symptoms
# lemand
# potent
# ynthetic
# nticholinergic

# move up to
# "the Robinul response"

**In treating hypersecretion and hypermotility associated with gastritis are you disappointed in the results you've been getting with some of the synthetics? Then *move up* to a potent anticholinergic—Robinul® Forte (2 mg. glycopyrrolate). It provides prompt, pronounced, prolonged suppression of gastric hypersecretion, making it a highly effective agent in gastritis and other upper G-I conditions associated with hypersecretion and hypermotility. Because Robinul Forte exerts a profound antispasmodic action, it is also useful in the treatment of lower G-I disorders, such as functional bowel distress and spastic and irritable colon. If the patient has a "one tract mind" concerning his condition, you can help control the anxiety and tenseness by prescribing Robinul®-PH Forte (2 mg. glycopyrrolate with 16.2 mg. phenobarbital —warning: may be habit forming).**

# Robinul® 2mg. Forte (glycopyrrolate)

DICATIONS Robinul Forte (glycopyrrolate, 2 mg.) and Robinul-PH Forte are double-strength dosage forms of glycopyrrolate. They are primarily
ated for patients who are less responsive to anticholinergic therapy and for control of the more prominent symptomatology associated with
episodes of gastrointestinal disorders. Emphasis should be on total management, with due consideration of the various therapeutic modalities
ble, including diet, antacids, anticholinergic agents, sedatives, and attention to emotional problems. Accordingly, glycopyrrolate is recom-
ed in the management of gastrointestinal disorders amenable to anticholinergic therapy, such as: (1) duodenal ulcer, duodenitis, pylorospasm;
astric ulcer, gastritis, esophageal hiatal hernia, hyperchlorhydria, pyrosis, aerophagia, gastroenteritis; (3) esophagitis; (4) cholecystitis, chronic
eatitis; (5) spastic and irritable colon, ulcerative colitis, functional bowel distress, diverticulitis, acute enteritis, diarrhea; and (6) splenic flexure
ome, neurogenic gastrointestinal disturbances. When these conditions are associated with psychic overlay, the formulation with phenobarbital
e indicated. ■ CONTRAINDICATIONS Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric reten-
prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH
(glycopyrrolate with phenobarbital), sensitivity to phenobarbital. ■ PRECAUTIONS Administer with caution in the presence of incipient
oma. ■ SIDE EFFECTS The most frequent side effect noted during clinical trials was dry mouth. Thirty-three (3.3%) of 1,009 patients receiving
32 mg. of glycopyrrolate a day complained of dry mouth of moderate to severe degree, but only 11 discontinued treatment because of this.
d vision, constipation, and urinary hesitancy have been reported infrequently. Other side effects associated with the use of anticholinergic
include: tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsi-
and rash. ■ DOSAGE The average and maximum recommended dose of Robinul Forte (glycopyrrolate, 2 mg.) or Robinul-PH Forte is one
three times daily (in the morning, early afternoon, and at bedtime). To obtain optimum results, dosage should be adjusted to the individual
t's response. After the more severe symptoms associated with acute conditions have subsided, the dose may be reduced to the minimum
ed to maintain symptomatic relief. ■ SUPPLY Robinul Forte (glycopyrrolate, 2 mg.) is available as scored, compressed pink tablets engraved
2 in bottles of 100 and 500. ■ Robinul-PH Forte (glycopyrrolate, 2 mg., with phenobarbital, 16.2 mg.) is available as scored, compressed blue
s engraved AHR/2 in bottles of 100 and 500.

A. H. Robins Company, Richmond, Va. A·H·ROBINS

# You can't fell a redwood with a hatchet

**With vitamins, too, relative needs determine the choice.**

A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a *high potency formula* will do.

THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.

**Theragran®**

**High Potency Vitamin Formula**

**Theragran®-M**

**High Potency Vitamin Formula with Minerals**

THERAGRAN TABLETS AND LIQUID CONTAIN 600% OF THE MINIMUM DAILY ADULT REQUIREMENT OF VITAMIN C.

**SQUIBB**

'The Priceless Ingredient of every product is the honor and integrity of its maker.'™

© E.R. Squibb & Sons, Inc. 1970

# Book Reviews

**Hormones and The Immune Response.** Ciba Foundation Study Group No. 36. G. E. WOLSTENHOLME AND JULIE KNIGHT, editors. Pp. 172 with illustrations. London: Churchill, 1970.

This small book, another of the excellent Ciba Foundation Symposia should be read by both the immunologist and the endocrinologist alike because it touches on an area that is probably somewhat of an interface between these two highly technical subspecialties in medicine. The conference was held in May of 1970, and it brought together a number of well-recognized persons in the field of the thymus and autoimmunity. Papers of this volume are presented by such outstanding individuals as Abraham White of the Einstein College of Medicine, W. Pierpaoli of the Swiss Research Institute in Davos-Platz, Switzerland, and A. Szenberg of the World Health Organization.

The chairman of this meeting, Dr. J. H. Humphrey of the National Institute for Medical Research, Mill Hill, put his finger on one of the main topics of the conference by suggesting that hormones, known and unknown, have marked and often differential effects on the development of capacities of lymphocytes, and so on the immune response itself. The papers that comprise this small volume are concerned with the effect of hormones on the development and maintenance of tissues involved in the immune response in both animals and man.

The role of thymosin in maintaining immunological competence was clearly discussed by White and Goldstein while in a companion paper another thymus humoral factor capable of reversing many of the aspects of the immunologic damage resulting from neonatal thymectomy is described by Tranin and Small from the Weizzmann Institute. The role of testosterone in influencing the development of tissues responsible for immunity is covered, as is the role of thyroxin and cortisole in influencing immunologic response. Lance and Cooper from the Hospital for Special Surgery, New York, indicate the degree of synergism which exists between cortisole and antilymphocytic serum, while C. T. Ambrose of the Harvard Medical School discusses the view that the immune response is dependent on corticosteroids for its induction. Pierpaoli and co-workers from Switzerland have summarized their work suggesting that somatotropic hormone is a thymotropic hormone which influences the cellularity of all lymphoid tissues. The fact that acidophilic cells in the pituitary degranulate after thymectomy is suggested as evidence for the role of somatotropic hormone as a thymotroph. Thyroxin also appears to be responsible for maintaining immunologic competence and, inhibition of thyroid function by antithyrotropic hormone or propylthiouracil results in changes in lymphoid tissues and impairment of the immune response. Effects similar to this can be reversed by both growth hormone or exogenous thyroxin.

This brief review is only to indicate some of the fascinating and undoubtedly significant relationships that the workers in this field are exploring. The discussions at the end of each paper are extremely useful in bringing out additional material which is not covered in the presentations and the bibliographies appear to be adequate. I would recommend this small book as useful and stimulating reading, for it brings to light a gray zone in knowledge about which we'll hear much more in the future.

JAY SHAPIRO, M.D.

**Campbell's Operative Orthopaedics**, 5th edition. A. H. CRENSHAW, editor. Price, $79.50. Pp. 2044 with 3472 illustrations and 2 color plates. St. Louis: C.V. Mosby Company, 1971.

This two volume classic, commemorates the golden anniversary of the Campbell Clinic. As in previous editions, it presents a "gold mine" of information for all physicians dealing with disease and trauma of the muscular skeletal system. Its emphasis is of course on operative care, however much useful information on conservative management and general principals is presented as well.

All illustrations are well done and of high quality. The bibliography is almost all inclusive, however division into subject headings would make its use easier. This has been done in several chapters but not uniformly throughout.

The fifth edition contains an expanded section on surgery of the hand which is excellent, and really represents a small textbook in its own right.

As is the difficulty with any work of this scope, several newer procedures such as "total hip replacement" and "arthroscopy of the knee" have been omitted while many older operations which have outgrown their usefulness are still included. The text still retains long sections on Poliomyelitis and Tuberculosis. Separate expanded sections on Rheumatoid Arthritis and the care of the stroke patient would be more applicable at this time.

The weaknesses of the work are considered minor when compared to its strengths. There are very few American Orthopaedic Surgeons who do not use these two volumes as a quick reference source. When dealing with a new or formidable problem, the original source material should be studied, since in most cases the primary article is more complete and contains a greater number of illustrations. If, however, for some reason one were restricted to a single volume in this field one would have to choose Campbell's Operative Orthopaedics.

GEORGE J. SCHONHOLTZ, M.D.

**Synopsis of Pediatrics**, 3rd edition. JAMES G. HUGHES, M.D., with numerous contributors. Price, $14.50. Pp. 1141 with 88 illustrations. St. Louis: C. V. Mosby Company, 1971.

This is the third edition of what has become a standard pediatric text. Although called a synopsis, and presented in compact format, there are over 1000 pages, attesting to the full coverage of the problems of pediatrics. Discussions in depth and lengthy presentations of controversial subjects are avoided, but sufficient information is given to furnish the reader a concise picture of the subject. The narrative form of presentation is used throughout, and the tabular form of many such books is generally avoided. Except in rare instances, as in the chapter on Mental Retardation and Learning Disorders, references are not given.

The text is up to date, with excellent discussions of chromosomal abnormalities, genetic counseling, immune deficiency syndromes, and mesenchymal diseases, as well as more usual topics. Especially useful and informative are the sections on Newborn and Perinatal Pediatrics, Infectious Diseases, and Diseases of the Nervous System. Tables and illustrations are excellent, and while the index is not as complete as might be desirable, it is in keeping with the nature of the book.

The contributors are drawn largely from Dr. Hughes' own group at the University of Tennessee. This makes for a certain symmetry and cohesiveness in presentation, avoids repetition, and allows for a more uniform approach to problems without becoming too didactic. The book obviously represents the labors of experienced teachers, and therefore is eminently suitable as a supplemental text and ready reference handbook for students, residents, teachers and practitioners. It is highly recommended for inclusion on the pediatric bookshelf of all those individuals interested in the health of children.

WILLIAM A. HOWARD, M.D.

**Medical Specialty Terminology**, Volume I–Pathology, Clinical Cytology and Clinical Pathology. CLARA GENE YOUNG AND JAMES D. BARGER, M.D. Price, $8.50. Pp. 251 with illustrations. St. Louis: C.V. Mosby Company, 1971.

This is a source book which tries to explain to paramedical personnel what the scientific meanings are of the medical terminology used in anatomical, surgical and clinical pathology. It is designed to exceed the standard definitions provided by medical dictionaries and give some insight into the operation of pathology laboratories, particularly in hospitals. The material has been presented in three related sections entitled, "Pathology", "Clinical Cytology" and "Clinical Pathology". Each division is handled in a similar manner. First, the definition of that medical science followed by general descriptions of important terms utilized in that medical science. This is followed by a general glossary and completed with a list of pertinent references to important publications. The book contains 14 useful and informative tables and one diagram.

Without question, this book meets a definite need for information that is not ordinarily provided in medical dictionaries. It tells how a laboratory operates in general terms. It describes many medical terms and disease conditions. It gives a concise review of the basic pathophysiologic changes in diseases which serves as the basis for the tests ordered in modern laboratories. It does not tell how tests are performed. It fails to relate how quality control measures are employed to validate the test results. No mention is made of the automated laboratory equipment and computers now being used in the laboratory. A brief description of automated laboratory tests and definitions of essential terms used with computers would be valuable. This book will prove to be useful as a supplementary reference source for the allied health scientist and other paramedical personnel.

WILLIAM J. JAFFURS, M.D.

**Stereoscopic Atlas of Slit-Lamp Biomicroscopy.** ALSON E. BRALEY, M.D., ROBERT C. WATZKE, M.D., LEE ALLEN, AND OGDEN FRAZIER. Price, $79.50. Pp. 225 with 213 illustrations and 210 stereoscopic views in full color on 30 View-Master reels. St. Louis: C.V. Mosby Company, 1970.

Thanks to the genius of the engineers of the Carl Zeiss Optical Company and to the genius of Mr. Lee Allen, photographer par excellence of the University of Iowa Department of Ophthalmology, literally anything that can be seen with the slit-lamp can now be photographed in full stereo color and viewed at leisure in three dimensions. Even with this instrumentation, photographic skill is required to get the excellent pictures provided with this set of two volumes and the authors are to be congratulated for the high quality of their work. The student or practitioner of ophthalmology can obtain no better visual review of biomicroscopy than to go through the 30 View-Master reels from the front to the back of the eye.

The authors have recognized that the essence of their contribution is the stereoscopic photography itself and they have not burdened us with more than minimal descriptive material. I would have preferred at least a brief discussion of some of the clinical and pathological findings depicted, but this is certainly a small omission and such information can easily be obtained from other standard references. The authors have also fortunately not attempted to be exhaustive but instead have presented illustrative material in the major phases of biomicroscopy: conjunctiva, cornea, iris, anterior chamber, chamber angle (gonioscopy), lens, vitreous, retina and choroid. The technique of slit-lamp stereo photography is described in the first chapter.

Two of the most difficult slit-lamp findings to illustrate by drawing are beautifully demonstrated by the authors' stereo photography: cellular reaction in the anterior chamber due to uveitis and detachment of the posterior vitreous. These illustrations and others like them will supersede the beautiful but non-stereo pictures of slit-lamp biomicroscopy found in Alfred Vogt's 1930 Atlas or Milton Berliner's 1949 Atlas. The artists for these old atlases of biomicroscopy would be stunned and delighted to see the improvement in biomicroscopy illustration achieved in a flash with this stereoscopic slit-lamp photography.

This atlas should be useful to anyone who uses the slit-lamp biomicroscope. It should be included in every ophthalmology library.

WILLIAM B. GLEW, M.D.

**We located our offices just off Farragut Square to better serve the professional* and personal insurance needs of doctors.**

Employees Workmen's Compensation • Bonds on Employees • Equipment Floater • Fire Insurance Contents • Business Expense Disability • Non-Cancellable Disability Income • Auto and Home Insurance

*As endorsed by the Medical Society of the District of Columbia.

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*

# ►OBITUARIES

## Lendall C. Gay
## (1913–1971)

Dr. Lendall Croxton Gay, former administrator in the emergency room and admissions office at D.C. General Hospital, died July 28, 1971. He lived at 403 East Capitol Street.

Born in Kershaw, South Carolina, he attended Central High School in Washington, D.C. He received his undergraduate education at George Washington University and received his medical degree from the Medical College of Virginia in 1937. He interned and served his residency at D.C. General Hospital. Subsequent to his work at D.C. General Hospital, he went into private practice with his wife, Dr. Claudine M. Gay.

Dr. Gay was a member of the American Academy of General Practice, the Association of American Physicians and Surgeons and the Royal Society of Medicine in Britain, as well as the American Medical Association.

He is survived by his wife, of the home address; two sons, Gordon B., of Washington, and Spencer B., of Frederick, Md.; a sister, Mrs. E. Edgar Ruebush, and two grandsons.

## Isidore Lattman, M.D.
## (1894–1971)

Dr. Isidore Lattman, a retired Washington radiologist died July 19, 1971. He lived at Chevy Chase Nursing and Convalescent Home.

Born in Odessa, Russia, he was a graduate of George Washington University's undergraduate and medical schools. He interned at the Garfield Memorial Hospital from 1924–26. He was on the staff of Garfield Memorial, Children's, Homeopathic and Columbia hospitals. He taught at Georgetown University Medical School where he was an associate professor of pediatric radiology. He helped found the Pediatric Radiological Society.

Dr. Lattman is survived by a sister, Minnie Levin of New York; and a stepson, Richard Sasuly of San Francisco.

## Karl Hayden Wood, D.D.S.
## (1901–1971)

Dr. Karl Hayden Wood, formerly a Washington oral surgeon, died August 3, 1971. He lived at 2256 Riverside Drive, N.E., Gainsville, Georgia.

Born February 26, 1901 in Maine, he received a degree in pharmacy from Milton College of Pharmacy, Baltimore, Maryland in 1925. In 1933, he graduated with a degree in dentistry from Georgetown University, Washington, D.C.

Dr. Wood specialized in Oral and Maxillo-facial Surgery in the Washington area until he moved to Georgia in 1964. He had, at one time, served as director of oral surgery at George Washington University Hospital and Chief of Oral Surgery at Casualty Hospital and Garfield Memorial Hospital.

He is survived by his wife, Hattie Cobean Wood.

## William H. Beard, M.D.
## (1906–1971)

Dr. William Henry Beard, a Washington physician who formerly commanded the District Air Guard's 113th Tactical Fighter Wing Hospital, died July 21, 1971. He lived at 4910 Sedgwick Street, N.W.

Born in Washington, D.C. he attended Rockville Military Academy and the Woodberry Forest School of Virginia. He attended the University of Virginia and received his bachelor's degree from George Washington University. He received his medical degree from the George Washington University School of Medicine in 1933. He interned at Emergency Hospital where he also served his residency as well as at Columbia Hospital.

During World War II, Dr. Beard was senior surgeon for the 19th Tactical Air Command, which flew air support for General George S. Patton's forces. He also helped coordinate medical activities on the continent after the Normandy invasion. His decorations received during 30 years of active and reserve duty include the Bronze Star and the District National Guard Meritorious Award.

He is survived by his wife, Mary of the home address, and a daughter Daphne; two brothers, Superior Court Judge Edward A. Beard and Reginald Beard, both of Washington; and a sister, Mrs. Robert E. Moran of Potomac.

**NURSES REGISTRY**

LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**

## Community Health Week

The physician is responsible for providing the best health care and his presence and leadership within the community is a vital force in maintaining the progress essential to the health and well-being of our population.

In regard to this, Community Health Week provides an opportunity for us to evaluate our individual and collective efforts. During the week of October 17th–23rd the following activities will be featured.

1. Seminars to study major health issues will be held.
   Monday, October 18th
   9:00–12 Noon
   *Lead Poisoning*
   Co-chairmen:
   Dr. Clifton Gruver & Mr. Dudley Anderson
   Wednesday, October 20th
   2:00–5:00 p.m.
   *Venereal Disease*
   Co-chairmen:
   Dr. Peter Horvath, Dr. James Curtin & Mr. Myron Arnold
   Friday, October 22nd
   9:00–12 Noon
   *Drug Abuse*
   Co-chairmen:
   Dr. Donald Glew & Dr. Earl Mitchell

Leading authorities in areas relating to these problems will be presenting information and participating in discussions. The audience will be comprised of those in our locality who have specific professional, technological, civic, or legislative interest in this topic as well as the members of the Society.

2. Free health screening in several locations within the City will be provided to emphasize the need for periodic medical examinations, and to highlight the facilities available. The screening will be held from Monday, October 18th–Friday, October 22nd from 9:00 a.m.–3:30 p.m. The following will be utilized:
   1. Upshur Public Health Service Clinic
      1325 Upshur Street
      General Exams
   2. D.C. General Hospital Public Health Service Clinic
      1905 E Street, N.E.
      General Exams
   3. Mobile Van
      7th & H Streets, N.E.
      General Exams
   4. Model Cities
      Stanton Park area
      Ophthalmology Exams

3. Special radio and TV announcements will be presented to promote health careers. Those interested can obtain a free booklet describing types of careers available by calling the Medical Society (223–2230). Listings for training centers in the Metropolitan area will also be available.

The individuals comprising the Community Health Week Committee are:

Mayor Walter Washington—Honorary Chairman
Dr. James Snyder—Chairman

Mr. Dudley Anderson
Mr. Myron Arnold
Mr. Lou.Brott
Dr. Joseph Chapman
Dr. James Curtin
Dr. Donald Glew
Dr. Clifton Gruver
Dr. Donald Haut
Dr. Peter Horvath
Dr. John Johnson
Dr. Lewis Kurtz
Dr. Irving Lichtman
Dr. Benjamin Manchester
Dr. Earl Mitchell
Mr. Philip Rutledge
Dr. Raymond Standard

---

## ► NEW MEMBERS

### *Active*

EDWARD BLACK, M.D. Office: 2021 L Street, N.W. Born in Philadelphia, Pennsylvania. Medical degree: New York Medical College, 1963. Specialty: Psychiatry.

LAWRENCE T. BOWLES, M.D. Office: One Dupont Circle. Born in Mineola, New York. Medical degree: Duke University Medical School, 1957. Specialty: Thoracic and Cardiovascular Surgery.

BENJAMIN BRANCH, M.D. Office: 1726 Eye St., N.W. Born in Glen Ridge, New Jersey. Medical degree: Harvard Medical School, 1956. Specialty: Obstetrics-Gynecology.

CAREY CAMPBELL, M.D. Office: 2150 Pennsylvania Ave., N.W. Born in Hattiesburg, Mississippi. Medical degree: University of Mississippi Medical School, 1964. Specialty: Neurosurgery.

EDUARDO CANILANG, M.D. Office: Georgetown University Hospital. Born in Manila, Philippines. Medical degree: University of the Philippines, 1966. Specialty: Otolargyngology.

MARIANNE H. ECHARDT, M.D. Office: 2014 Hillyer Place. Born in Berlin, Germany. Medical degree: University of Chicago, 1936. Specialty: Psychiatry-Psychoanalysis.

DANIEL EIN, M.D. Office: 916-19th Street, N.W.

Born in Liege, Belgium. Medical degree: Albert Einstein College of Medicine, 1964. Specialty: Internal Medicine.

GLORIA ENG, M.D. Office: 2125 13th Street, N.W. Born in Milwaukee, Wisconsin. Medical degree: Marquette University School of Medicine, 1955. Specialty: Physical Medicine and Rehabilitation.

ELEANOR FLORES, M.D. Office: 2150 Pennsylvania Avenue, N.W. Born in Manila, Philippines. Medical degree: University of Santo Tomas, 1962. Specialty: Internal Medicine.

FREDERICK J. FRENSILLI, M.D. Office: 2150 Pennsylvania Avenue, N.W. Born in Boston, Massachusetts. Medical degree: Georgetown University School of Medicine, 1961. Specialty: Urology.

LEWIS IVEY, M.D. Office: Freedmen's Hospital. Born in Spartansure, South Carolina. Medical degree: Howard University, 1963. Specialty: Thoracic and Cardiovascular Surgery.

RONALD J. KARPICK, M.D. Office 2150 Pennsylvania Avenue, N.W. Born in Buffalo, New York. Medical degree: Yale University School of Medicine, 1965. Specialty: Internal Medicine–Pulmonary Disease.

STEVEN LIPSIUS, M.D. Office: 2150 Pennsylvania Avenue, N.W. Born in Philadelphia, Pennsylvania. Medical degree: Temple Medical School, 1963. Specialty: Psychiatry.

CHARLES F. MESS, M.D. Office: 2141 K Street, N.W. Born in Newark, New Jersey. Medical degree: New Jersey College of Medicine, 1964. Specialty: Orthopedics.

JERRY F. MEYER, M.D. Office: 2150 Pennsylvania Avenue, N.W. Born in Joliet, Illinois. Medical degree: University of Chicago, 1963. Specialty: Cardiology.

STEFAN A. PASTERNACK, M.D. Office: Georgetown Medical Center. Born in Jersey City, New Jersey. Medical degree: Georgetown University Medical School, 1965. Specialty: Psychiatry.

RAFAEL RIVERA, M.D. Office: 2150 Pennsylvania Avenue, N.W. Born in Puerto Rico. Medical degree: University of Puerto Rico Medical School, 1960. Specialty: Gastroenterology.

VICTOR F. SCOTT, M.D. Office: Freedmen's Hospital. Born in Bermuda. Medical degree: Howard University, 1966. Specialty: Internal Medicine.

HERBERT SINGER, M.D. Office: 106 Irving Street, N.W. Born in Washington, D.C. Medical degree: Washington University School of Medicine, 1964. Specialty: Gastroenterology.

PAULINE TITUS-DILLON, M.D. Office: Freedmen's Hospital. Born in Jamaica, West Indies. Medical degree: Howard University, 1964. Specialty: Internal Medicine.

INEZ JONES WHITE, M.D. Office: 2141 K Street, N.W. Born in Filbert, West Virginia. Medical degree: Medical College of Pennsylvania, 1967. Specialty: Psychiatry.

### *Associate*

CLARENCE J. DUKE, M.D. Office: Holy Cross Hospital, Silver Spring, Maryland. Born in Pittsburgh, Pennsylvania. Medical degree: Marquette University, 1955. Specialty: Physical Medicine and Rehabilitation.

MILDRED EIDELMAN, M.D. Office: 1602 Dilston Road, Silver Spring, Maryland. Born in Bronx, New York. Medical degree: Women's Medical College of Pennsylvania, 1958. Specialty: General Practice.

THOMAS HOOD, M.D. Office: 1001 Connecticut Avenue, N.W. Born in Lawrence, Kansas. Medical degree: University of Kansas, 1939. Specialty: Preventive Medicine and Public Health.

LAURENCE H. MILLER, M.D. Office: 1712 Eye Street, N.W. Born in Newark, New Jersey. Medical degree: University of Lausanne, Switzerland, 1961. Specialty: Dermatology.

PAUL S. PARRINO, M.D. Office: Veterans Administration Hospital. Born in New Orleans, Louisiana. Medical degree: Tulane University Medical School, 1931. Specialty: Physiatry.

SANFORD N. RICHMAN, M.D. Office: 10401 Old Georgetown Road, Bethesda, Maryland. Born in Savannah, Georgia. Medical degree: Medical College of Georgia, 1964. Specialty: Internal Medicine-Gastroenterology.

SHERMAN P. VINOGRAD, M.D. Office: NASA Headquarters, D.C. Born in Milwaukee, Wisconsin. Medical degree: University of Wisconsin, 1946. Specialty: Government Research and Space Medicine.

EDWARD C. WERNER, M.D. Office: 9401 Indian Head Highway, Oxon Hill, Maryland. Born in Brooklyn, New York. Medical degree: University of Maryland, 1963, Specialty: Obstetrics-Gynecology.

### *Resident-Intern*

GENERAL RUDOLPH PEARSON, M.D.,Office: Freedmen's Hospital. Born in Lynch, Kentucky. Medical degree: Howard University, 1966. Specialty: Obstetrics-Gynecology.

### *Student*

GEORGETOWN UNIVERSITY. *Freshmen:* John J. Wassel. *Sophomores:* Jerold Parrish, Ralph Sweeney.

GEORGE WASHINGTON UNIVERSITY. *Freshmen:* Michael Callahan, Michael Greene. *Sophomores:* David G. Lewis, Fernando Villarreal. *Juniors:* Robert C. Bransfield, Michael A. Cerruti, Jay Katzen.

HOWARD UNIVERSITY. *Sophomores:* Barrett L. Burka, Gerald Schiff.

# ►GENERAL NEWS

The following physicians in the District of Columbia have recently met the high standards of the **American College of Physicians** and have been granted **Fellowships** in the 56-year-old international medical specialty society: William P. Argy, Jr., M.D., Joseph D. Croft, Jr., M.D., Stuart H. Danovetch, M.D., Milton Gusack, M.D., Ramon B. Jenkins, M.D., and Nelson P. Trujillo, M.D.

The College dedicates itself to upgrading medical care, teaching, and research through stringent standards of membership and programs of continuing education.

The **Washington Dermatological Society** has elected the following officers for 1971-72: Morton A. Kress, M.D., President; Robert B. Point, M.D., Vice President; and Mervyn L. Elgart, M.D., Secretary-Treasurer.

The **Georgetown University Medical Center** announces a course in **"Orthpaedic Pathology"** sponsored by the Orthopaedic Division, and presented by Lent C. Johnson, M.D., of the Armed Forces Institute of Pathology. The course consists of 80 hours which includes 30 hours of laboratory direction. It will be held at the Marriott Motel, Key Bridge, Washington, D.C., January 2-9, 1972. For further information contact Dr. George W. Hyatt, 3800 Reservoir Road, N.W., Washington, D.C. 20007

If you have been prescribing modified fat diets for your coronary patients, you should take issue with **FDA's proposed new regulations governing food labeling in this field.**

The proposed regulations, published June 15, 1971 in the Federal Register, actually prohibit food processors from giving detailed information about amounts of saturated and polyunsaturated fat and cholesterol in the foods.

MW/RMP urges all physicians and interested parties to write to the FDA requesting that the regulations be revised to require all fat containing foods to state the amount of fat and cholesterol and the percentages of the total fat which are saturated and polyunsaturated.

Written comments must be sent no later than November 12, 1971 to: Health, Education and Welfare, Room 6-62, 5600 Fishers Lane, Rockville, Maryland 20852.

The **Herman Goldman Memorial Child Diagnostic Laboratories**, located in the Marcus J. Bles Building of Georgetown University Hospital, was dedicated September 21. The ceremony was held at the Child and Youth Center on the first floor of the Bles Building. The Herman Goldman Laboratories are an integral part of the Child and Youth Center.

The eight rooms of multidiscipline laboratories, named for the late Herman Goldman, New York attorney and philanthopist, were completed and equipped through a grant of $275,000 from the Herman Goldman Foundation, Inc. of New York City.

The laboratories will provide the Children and Youth Center and the total GU Medical Center with opportunity for increased scientific emphasis in genetics, biochemistry, virology, and endocrinology.

At the dedication, Matthew F. McNulty, Jr., vice president for medical center affairs, presided. The Rev. Robert J. Henle, S.J., president of Georgetown University, offered welcoming remarks, and Dr. Philip L. Calcagno, chairman of the department of pediatrics, delivered a brief address.

The **American Physicians Art Association** is inviting all physicians to become members of a national non-profit organization which is dedicated to furthering art interests of the medical profession; to broadening the physician's knowledge and appreciation of the past and present; to stimulating physician artists to produce works of art in the fields of painting, sculpture, photography, graphic arts, design and creative crafts; to holding a national annual exhibition of physicians' art works; and to stimulating regional art exhibitions of physicians' works at local, state and specialty meetings.

The art exhibit is held annually in conjunction with the annual meeting of the American Medical Association. The APAA has a membership which extends across the entire United States, Canada and Latin America. Every state in the Union is represented through a Regional Director. It is the hope of the APAA to establish a central photographic archive of its members' art works, to be used for year round press and magazine publicity in the physicians' home towns as well as nationally.

You do not necessarily have to be curently engaged in any art activity to become a member. Also welcomed would be the support of anyone interested in furthering physicians' art in America, as our organization is totally supported by the members and friends of the APAA. The types of membership are: Life Sponsor Membership $200.00, Sponsor Membership 30.00, or Regular Membership 15.00. Interested medical students, interns and residents may obtain Associate Membership status for $5.

If you are interested in becoming a member, or if you wish further information, please contact the President of APAA, A. M. Gottlieb, M.D., 3801 Miranda Avenue, Palo Alto, California 94304.

Scientists at The **George Washington University Medical Center** will assess the impact of **chromosomal defects** on **the development of the human eye** in an HIH-funded study.

A $93,409, one-year contract awarded to GWU by HEW's National Eye Institute (NEI) will permit the evaluation of developmental defects in the eye and visual system. Past studies have demonstrated that defects in chromosomes appear more frequently in aborted embryos (30 percent) than in newborn babies (eight percent). Therefore, an optimum investigation of eye defects calls for the availability of fetal material.

Approximately 150 human embryos having a variety of chromosomal abnormalities, as well as showing the effects of mutagenic agents, will be examined. The newly funded study will allow NEI to complement and extend its own research in this area which has been hampered by lack of human material.

Chief investigator for the project will be **Dr. Cecil B. Jacobson**, who is Assistant Professor of Obstretrics and Gynecology and Chief of GW's Reproductive Genetics Unit.

Dr. Jacobson has been conducting research in cytogenetics since 1960. Embryonic eyes are therefore available from specimens accumulated during his own series of three abortal studies and other investigations conducted within collaborating laboratories.

From these studies, the pathogenesis of defects of the eye and visual system in known chromosomal abnormalities may be determined with a view toward early therapy.

John W. McTigue, M.D., Washington, D.C. eye specialist, has been named Chief of the Division of Opthalmology, Department of Surgery, at Doctors Hospital here. Action took place at a recent meeting of the Hospital's Board of Directors.

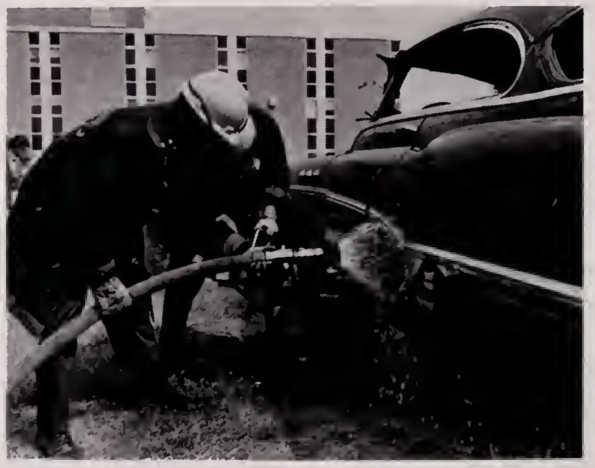
Dr. McTigue, who had held the rank of Senior Attending, replaces J. Spencer Dryden, M.D., who served 26 years in the post. Dr. Dryden was named Emeritus Chief of the Division.

A native of Logan, West Virginia, Dr. McTigue received his Bachelor of Arts degree at the University of Virginia and degree in medicine at the University of Pennsylvania where he also did his internship and residency. He further specialized at the Institute of Opthalmology, Presbyterian Hospital in New York City.

## MEETINGS

The American College of Surgeons has scheduled three sectional meetings in 1972: Jan. 17–19, Miami; Feb. 14–16, St. Louis; March 13–15, Philadelphia, the annual combined meeting for doctors and nurses.

All doctors of medicine may attend ACS meetings. Surgeons of outstanding ability will focus attention on newer ways of handling surgical problems through panels, symposia, "How-I-Do-It" clinics, scientific papers, and selected films. Each meeting features sessions in general surgery plus two or more surgical specialties.



To remove accident victims quickly, rescue workers must sometimes saw their way through the side of cars as illustrated above. The demonstration was held as part of a four-day course on emergency care and transportation of the sick and injured, sponsored by the American Academy of Orthopaedic Surgeons at the Georgetown University Medical Center. The course, held August 25-28, was attended by 250 ambulance attendants, firemen, policemen, nurses, members of volunteer rescue squads, public health personnel, civil defense workers, and other interested persons. Chairman of the meeting was Dr. George W. Hyatt, director of orthopaedics at Georgetown University Hospital.

Main
DONNATA
2 table
3 time

vacation in
a vial:
the spasm
reactors
in your practice
deserve

"the Donnatal® Effect"

| | each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol) | each Donnatal No. 2 | each Extentab® |
|---|---|---|---|
| h scyamine sulfate | 0.1037 mg. | 0.1037 mg. | 0.3111 mg. |
| at pine sulfate | 0.0194 mg. | 0.0194 mg. | 0.0582 mg. |
| h scine hydrobromide | 0.0065 mg. | 0.0065 mg. | 0.0195 mg. |
| pl nobarbital | (¼ gr.) 16.2 mg. | (½ gr.) 32.4 mg. | (¾ gr.) 48.6 mg. |
| ( rning: may be habit forming) | | | |

**Brief summary.** Side effects: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction as in prostatic hypertrophy. Contraindicated in patients with acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

A. H. ROBINS COMPANY, RICHMOND, VIRGINIA 23220

A·H·ROBINS

LEMON TREE SO VERY PRETTY,
AND THE LEMON FLOWER IS SWEET.
BUT ONE HUNDRED EIGHTY LEMONS,
IS IMPOSSIBLE TO EAT.
LEMON TREE IN KEY OF C
30 Capsules
Allbee with C
Each capsule Contains.
Thiamine mononitrate (Vit. B1) 15 mg
Riboflavin (Vit. B2) 10 mg
Pyridoxine hydrochloride (Vit. B6) 5 mg
Niacinamide 50 mg
Calcium pantothenate 10 mg
Ascorbic acid (Vit. C) 300 mg
A·H·ROBINS
AHR
AHR

# 2 ways to provide a month's therapeutic supply of Vitamin C: 180 lemons or 30 Allbee® with C

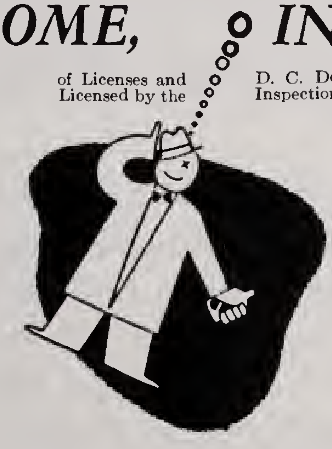
As a source of ascorbic acid, the lemon really hits a high C (50 mg.). But your patient would still have to eat 180 lemons every month—6 a day—to get a therapeutic dose. And as the calypso singer puts it, "one hundred eighty lemons is impossible to eat." Fortunately, a bottle of 30 Allbee with C capsules (taken one capsule daily) supplies as much Vitamin C as all those lemons, plus full therapeutic amounts of the B-complex vitamins. For example, as much $B_6$ as two pounds of corn. Allbee with C is no lemon! This handy bottle of 30 capsules gives your patient a month's supply at a very reasonable cost. Also the economy size of 100. Available at pharmacies on your prescription or recommendation.

A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

**KALORAMA CONVALESCENT HOME, INC.**

of Licenses and D. C. Department
Licensed by the Inspections



INSTITUTIONAL CARE

for the medical management of
the acute stages of alcoholism.

**2001 KALORAMA ROAD**
**at 20th Street, N.W. Adams 2-0063**

Ec-
on-
omy!

**Dicarbosil®**
ANTACID

Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

*ARCH LABORATORIES*
319 South Fourth Street, St. Louis, Missouri 63102

**PHYSICIANS' PLACEMENT SERVICE**

The Medical Society's **Physicians' Placement Committee** maintains a service to benefit its members and other physicians by locating suitable openings, assistants or associates. It will also assist Government agencies and industrial organizations to secure physicians for their Medical Departments. Call 223-2230—ask for Placement Service.

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

Surgical Supplies and Equipment

*Complete Fitting Service for*
*Ladies and Men*

**KLOMAN SURGICAL SUPPLY CO.**
**1028 19th Street, N.W.**
**Washington, D. C. 20036**

***Telephone:* 223-3444**

- desirable associates
- office space
- ancillary services
- may be obtained thru

**A CLASSIFIED ADVERTISEMENT**

- in the MEDICAL ANNALS

**Versapen®**
(hetacillin)

Once in the patient's body, it rapidly hydrolyzes into ampicillin.

# IS IT JUST AN AMPICILLIN?

# Extensive clinical experience has shown that this ampicillin derivative offers unique advantages over the ampicillin you may be presently prescribing:

**1/ A uniform adult and a uniform pediatric dosage in all mild-to-moderate infections due to susceptible organisms—respiratory, genitourinary, G.I., skin and soft tissue.**

Adults: 225 mg. q.i.d.

Children: 10 mg./lb./day in 4 equally divided doses.

The recommended dosage for Versapen (hetacillin) does not depend on site of infection, but on severity. Therefore, in mild-to-moderate infections due to susceptible organisms, you can prescribe Versapen (hetacillin) for the genitourinary tract at the same dose recommended for the respiratory tract. Or any other infection site.

**2/ A low dosage for mild-to-moderate genitourinary infections** due to susceptible organisms.

**3/ A low dosage for mild-to-moderate pediatric infections** due to susceptible organisms.

**4/ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin.**

**5/ Lower patient cost.** Inherent with lower dosages for many indications is the benefit of lower cost to the patient. And, in these many instances, Versapen is significantly more economical to the patient than ampicillin brands.

**Side Effects.** As with any penicillin serious allergic reactions, including anaphylaxis, can occur. The type of side effects most frequently encountered are the same as with ampicillin, namely: diarrhea, loose stools, rash and nausea.

Please see next page for brief summary of prescribing information.

BRISTOL

# Versapen® (hetacillin)
# Versapen®-K (potassium hetacillin)

■ Versatile dosage forms...for all patients...of all ages. ■ A uniform adult and a uniform pediatric dosage for all susceptible mild-to-moderate infections...respiratory, genitourinary, G.I., skin and soft tissue. Recommended dosage varies with severity, not site, of infection. ■ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin. ■ Economical therapy.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
(A) 12/28/70
For complete information, consult Official Package Circular.

**Actions:** Hetacillin provides bactericidal levels of ampicillin but has no antibacterial activity itself. It hydrolyzes to ampicillin and has a half-life of 20 minutes at pH 7.1.

**Indications:** Hetacillin is indicated in the treatment of susceptible strains of the following organisms in the diseases listed. Bacteriology studies to determine the causative organisms and their sensitivity should be performed. Therapy may be instituted prior to obtaining results of sensitivity testing.

Group A beta-hemolytic Streptococcus: Tonsillitis, pharyngitis, otitis media, skin and soft tissue infections.

*Diplococcus pneumoniae:* Broncho- and lobar pneumonia, otitis media.

Nonpenicillinase-producing *Staphylococcus aureus:* skin and soft tissue infections, otitis media.

*H. influenzae:* Bronchitis and bronchopneumonia.

*Escherichia coli:* Cystitis, pyelonephritis, prostatitis/urethritis, skin and soft tissue infections.

*Proteus mirabilis:* Cystitis, pyelonephritis, skin and soft tissue infections.

Enterococcus (*Streptococcus faecalis*): Cystitis, pyelonephritis, prostatitis/urethritis.

Shigella species: Shigellosis.

Salmonella species: Salmonellosis (parenteral only).

Indicated surgical procedures should be performed.

Use parenteral drug only in severe infections or in patients unable to take oral medications.

**Contraindications:** A history of allergic reactions to penicillins or lidocaine.

**Warning:** Anaphylaxis may occur, particularly after parenteral administration and especially in patients with an allergic diathesis. Check for a history of allergy to penicillins, cephalosporins or other allergens. If an allergic or anaphylactic reaction occurs, discontinue hetacillin and institute appropriate treatment.

*Usage in Pregnancy:* Safety for use in pregnancy is not established.

**Precautions:** Mycotic or bacterial superinfections may occur. Assess renal, hepatic and hematopoietic function periodically during long-term therapy. Because intravenous administration of potassium hetacillin in doses in excess of 5 mg./Kg. has been noted to enhance the vasopressor effect of epinephrine in dogs, precautions should be taken with patients receiving epinephrine concurrently.

**Adverse Reactions:** Untoward reactions include: Glossitis, stomatitis, black "hairy" tongue, nausea, vomiting and diarrhea, skin rashes, urticaria, exfoliative dermatitis, erythema multiforme and anaphylaxis (usually with parenteral administration). Anemia, thrombocytopenia, thrombocytopenic purpura, eosinophilia, leukopenia, and agranulocytosis have been noted, are usually reversible and are believed to be hypersensitivity phenomena.

Elevations in one or more liver function tests have been reported without any evidence of hepatic toxicity.

Local reactions: Thrombophlebitis at the site of intravenous injection has been reported.

**Usual Dosage:** Patients weighing 90 lbs. or more: 225 mg. q.i.d. Patients weighing less than 90 lbs.: 2.5 mg./lb. q.i.d.

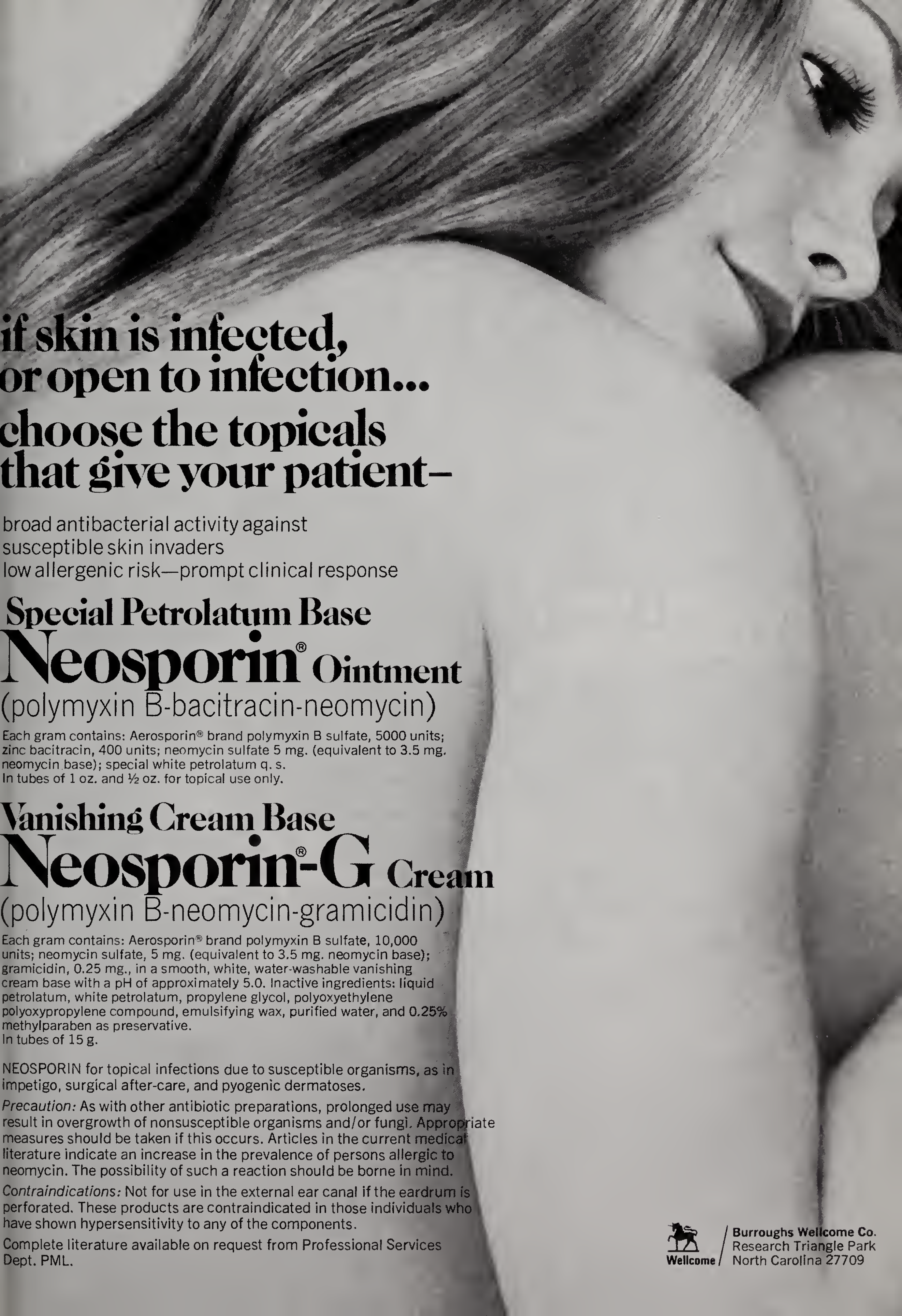
Group A beta-hemolytic streptococcal infections should be treated for at least 10 days. Administer oral preparations in a fasting state to insure maximum absorption.

**Recommended dosages (expressed in terms of ampicillin activity) in susceptible mild-to-moderate infections***

| | | |
|---|---|---|
| **Versapen®**<br>(hetacillin)<br>**112.5 mg.** | Chewable Tablets | *Usual pediatric dosage:* 10 mg./lb./day in 4 equally divided doses.<br>For a 45 lb. child: one tablet *q.i.d.* |
| | Oral Suspension (112.5 mg./5 ml.) | *Usual pediatric dosage:* 10 mg./lb./day in 4 equally divided doses.<br>For a 45 lb. child: 1 tsp. *q.i.d.*<br>Available in 40 ml., 80 ml., and new 100 ml. bottles. |
| | Pediatric Drops (112.5 mg./ml.) | *Usual dosage:* 10 mg./lb./day in 4 equally divided doses.<br>For a 10 lb. child: ¼ dropper *q.i.d.*<br>Available in 10 ml. bottles. |
| **Versapen®-K**<br>(potassium hetacillin)<br>**225 mg.** | Capsules | *Usual adult dosage:* one 225 mg. capsule *q.i.d.* |
| | I.V.<br>I.M. with Lidocaine HCl (20 mg./vial) | *For patients weighing 90 lbs. or more:* 225 mg. *q.i.d.*<br>*For patients weighing less than 90 lbs.:* 10 mg./lb./day in 4 equally divided doses. |

*For severe infections—Adults: 450 mg. *q.i.d.* Children up to 90 lbs.: 20 mg./lb./day in 4 equally divided doses. Very serious infections may require very high doses and prolonged therapy. *Note:* Versapen® has been issued Patent No. 319880

**BRISTOL** BRISTOL LABORATORIES/Division of Bristol-Myers Company/Syracuse, New York 13201



# if skin is infected, or open to infection...
# choose the topicals that give your patient–

broad antibacterial activity against
susceptible skin invaders
low allergenic risk—prompt clinical response

**Special Petrolatum Base**
**Neosporin® Ointment**
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 5000 units; zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

**Vanishing Cream Base**
**Neosporin®-G Cream**
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

*Precaution:* As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

*Contraindications:* Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.

Wellcome

**Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

# THE NIGHT SHIFT OF DEPRESSION...

Depression is a 24-hour-a-day problem... and disturbed sleep is often its nocturnal expression. In fact, such disturbance may be a key symptom in establishing the diagnosis of depression.

# WHEN THE DIAGNOSIS IS DEPRESSION

# ELAVIL® HCl

(AMITRIPTYLINE HCl | MSD)

TABLETS: 10 mg, 25 mg, and 50 mg
INJECTION: 10 mg/cc

**When depression is serious enough to warrant medication, ELAVIL HCl may prove extremely helpful. Unlike psychic energizers or agents that merely elevate mood, ELAVIL HCl embodies a mild antianxiety action which manifests itself even before the fundamental antidepressant activity of the drug becomes evident. Daytime drowsiness occurs in some patients, usually within the first few days of therapy.**

**NOTE: Not recommended during the acute recovery phase following myocardial infarction. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible. Should not be given to patients who have received an MAOI within two weeks.**

**Contraindications:** Known hypersensitivity. Should not be given concomitantly with or within at least 14 days following the discontinuance of a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl cautiously with gradual increase in dosage until optimum response is achieved. Not recommended during the acute recovery phase following myocardial infarction or for patients under 12 years of age.
**Warnings:** May block the antihypertensive action of guanethidine or similarly acting compounds. Should be used with caution in patients with a history of seizures or urinary retention, or with narrow-angle glaucoma or increased intraocular pressure. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. Safe use during pregnancy and lactation has not been established; in pregnant patients, nursing mothers, or women who may become pregnant, weigh possible benefits against possible hazards to mother and child.
**Precautions:** When used to treat the depressive component of schizophrenia, psychotic symptoms may be aggravated; in manic-depressive psychosis, depressed patients may experience a shift toward the manic phase, and paranoid delusions, with or without associated hostility, may be exaggerated; in any of these circumstances, it may be advisable to reduce the dose of amitriptyline HCl, or to use a major tranquilizing drug, such as perphenazine, concurrently.

When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.
**Adverse Reactions:** *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.
*Cardiovascular:* Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. *Anticholinergic:* Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. *Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. *Other:* Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. *Withdrawal Symptoms:* Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.
**How Supplied:** Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

*For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486*

**MSD** MERCK SHARP & DOHME

**She knows the facts of life. Or does she?**

Chances are she's a little hazy about the nutrition facts of life at this most critical time of her life.

Her mother says "Eat!"

Her appetite says a cucumber sandwich.

We say she needs to eat the right amount of the right foods at the right times. Or else.

We're National Dairy Council.

Supported by the dairy industry, we sponsor research to learn more about what roles various nutrients play throughout life. Including the critical pregnancy period.

We provide program assistance, nutrition information and a communications materials program to get the nutrition information she needs into her hands. And put to use.

Most important, we maintain a dedicated, highly-professional staff of people who search for the truths in nutrition research and education.

Because at a time like this, we're not about to settle for anything less.

**Dairy Council of Greater Metropolitan Washington, D.C.**

An affiliate of National Dairy Council,
an educational, scientific institution.

**IN ASTHMA**
**IN EMPHYSEMA**

*optional therapy*

**THE mudranes®**

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

**MUDRANE—original formula**
*First choice*

**MUDRANE-2**
*When ephedrine is too exciting or is contraindicated*

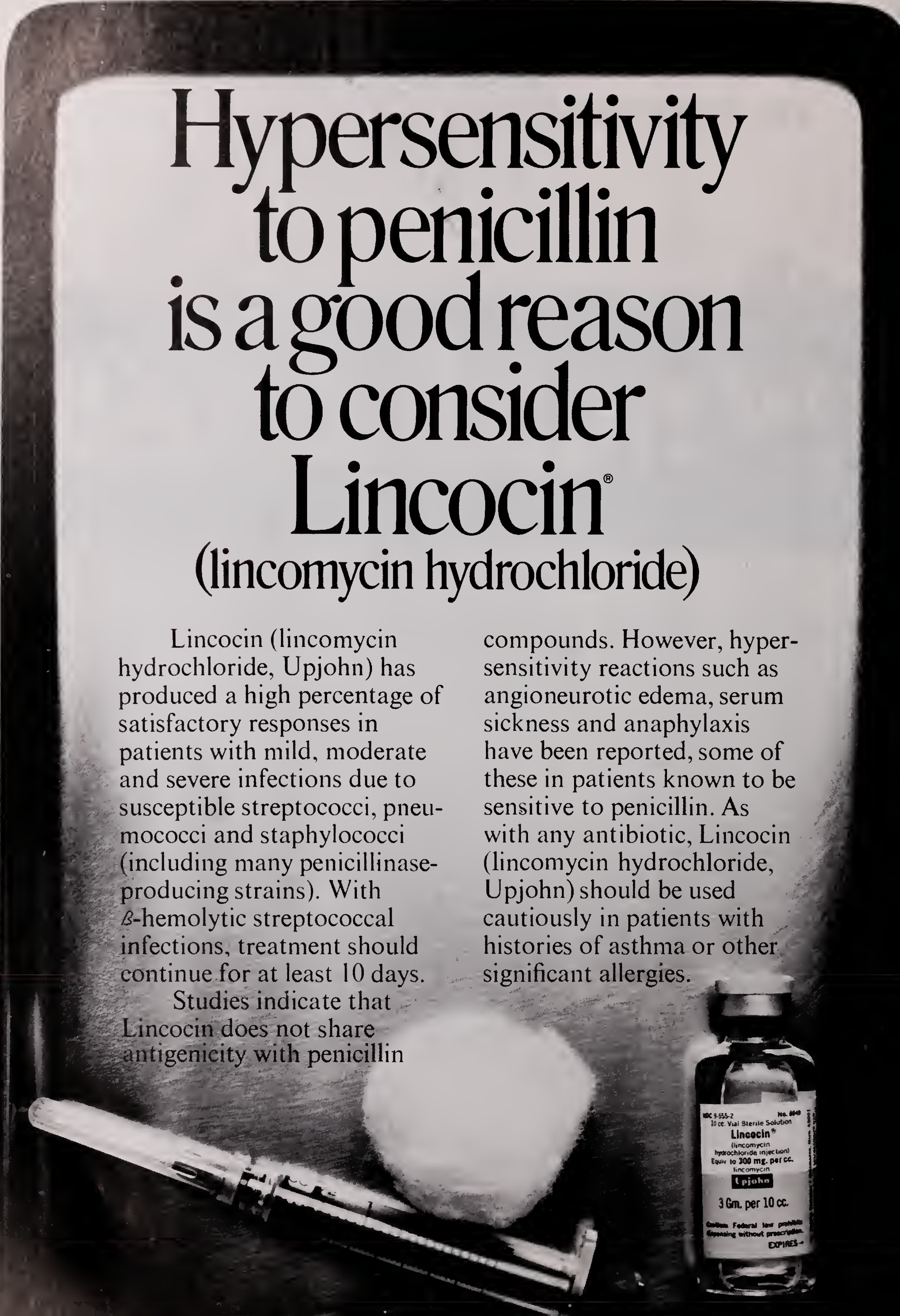
**MUDRANE GG**
*During pregnancy or when K.I. is contraindicated or not tolerated*

**MUDRANE GG-2**
*A counterpart for Mudrane-2*

**MUDRANE GG ELIXIR**
*For pediatric use or where liquids are preferred*

*Clinical specimens available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217
*Manufacturers of Ethical Pharmaceuticals*



NDC 9-555-2
No. 8049
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits
dispensing without prescription.
EXPIRES→

# Hypersensitivity to penicillin is a good reason to consider Lincocin®

## (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With ß-hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.

# So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

● Sterile Solution (300 mg. per ml.) ●

# Lincocin®

## (lincomycin hydrochloride, Upjohn)

10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
EXPIRES

© 1971 The Upjohn Company

● Sterile Solution (300 mg. per ml.) ●

# Lincocin®

## (lincomycin hydrochloride, Upjohn) for respiratory tract, skin, soft-tissue, and bone infections due to susceptible streptococci, pneumococci, and staphylococci

| Each preparation contains: | Lincomycin hydrochloride monohydrate equivalent to lincomycin base |
|---|---|
| 250 mg. Pediatric Capsule | 250 mg. |
| 500 mg. Capsule | 500 mg. |
| *Sterile Solution per 1 ml. | 300 mg. |
| Syrup per 5 ml. | 250 mg. |

*Contains also: Benzyl Alcohol 9 mg.; and, Water for Injection—q.s.

An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of $\beta$-hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. *Local reactions*—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: *250 mg. and 500 mg.* Capsules—bottles of 24 and 100.

*Sterile Solution, 300 mg. per ml.*—2 and 10 ml. vials and 2 ml. syringe.

*Syrup, 250 mg. per 5 ml.*—60 ml. and pint bottles.

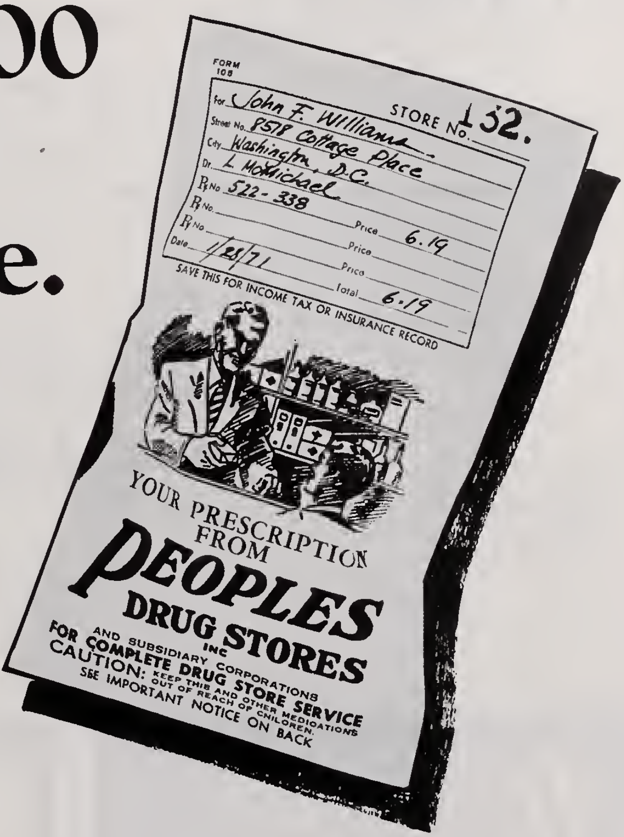
*For additional product information, consult the package insert or see your Upjohn representative.*

JA71-1203 MED B-5-SR (KZL-6)

The Upjohn Company
Kalamazoo
Michigan 49001

Upjohn

# The bag that has earned more than 125,000,000 votes of confidence.


FORM 108
For John F. Williams
STORE No. 152.
Street No. 8518 College Place
City Washington, D.C.
Dr. L. McMichael
Rx No. 522-338
Rx No.
Rx No.
Price 6.19
Price
Price
Date 1/28/71
Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD
YOUR PRESCRIPTION FROM
PEOPLES
DRUG STORES
INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN.
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®

PRESCRIPTION DRUG STORES

**WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.**

R M K

*Insurance Brokers and Consultants*

INSURANCE FOR THE DOCTOR

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

* endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

DataMedics

**The result is total management control & increased cash flow**

DataMedics is a group of experts . . . financial management consultants, data processing analysts, and members of the medical profession who are specifically oriented to medical management requirements.

Datamedics, the business manager for the medical industry, solves the unique problems that interfere with patient care:

- Billing
- Bookkeeping
- Collecting delinquent accounts
- Designing offices
- Leasing equipment
- Preparing insurance claim data
- Preparing payroll tax data
- Recruiting personnel
- Training personnel

**How?**
Consultation by appointment.

DM

**DataMedics, Inc.**

**National Headquarters**
**7979 Old Georgetown Road**
**Washington, D.C. 20014**
**(301) 654-7666**
**Cable/Medic**
**Baltimore (301) 792-4424**

MAXWELL
AND
TENNYSON
INC.

*Pharmacists*

916 Nineteenth Street, N.W.

SERVICE TO
PHYSICIAN & PATIENT
SINCE 1926

**PHONES**
**223-4711**
**223-9797**
**223-9798**

# CLASSIFIED ADVERTISEMENTS

**Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.**

***Classified advertisements of a professional nature are free to members.***

## OFFICE SPACE AVAILABLE

TO SHARE: Office space Silver Spring busy section University Blvd. West. Convenient to hospitals. Fully equipped Internist's office with Chem. Lab, X-Ray, EKG, phone lines, sec'y on duty. Happy to show, discuss any timing arrangements, etc. agreeable to both. Might be good second location for two interested doctors. Call Dr. Datlow, (301) 593-6010.

FOR RENT: Office for 2 doctors, 5323 Connecticut Ave., N.W. 3 examining rooms, 1 lab., 1 x-ray, and 1 waiting room. Contact Resident-Manager, Mr. Adams, (202) 362-7847.

FOR RENT: 1726 Eye St., N.W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298-6936.

FOR RENT: Office, supplies, equipment, and medical staff services provided in completely equipped, automated testing facility. Especially suitable for Internists and General Practitioners. Desirable northwest D.C. location with ample free parking. Contact Mr. Mel Allen, (202) 966-4300.

SOUTHWEST WASHINGTON: Doctor's suite, newly decorated. In hi-rise bldg. of Capitol Park, an apt. & townhouse complex of 1739 units covering 30 acres. Large reception area, 4 rms., 2 supply closets, lab (or kitchen). Only one MD in area. Telephone, (202) 393-1513.

FOR RENT: Doctor's Office – Upper Connecticut Ave., N.W. available immediately. Recently deceased physician practiced same location for 35 years. If required all equipment included in reasonable rental. Excellent opportunity. Call Mrs. Beard at (202) 234-0141, evenings at (202) 363-2828.

## EQUIPMENT FOR SALE

FOR SALE: Laboratory equipment including Bausch and Lomb binocular clinical microscope, Adams Readacrit Microhematocrit centrifuge, Clay-Adams centrifuge, Pelton-Crane autoclave and table. Telephone, (202) 296-8170.

## PRACTICE FOR SALE

GENERAL PRACTICE, established 40 years in Mt. Pleasant area, fully equipped office, x-ray, EKG, diathermy. Call Mrs. E. H. Markwood, (703) 536-7727 or write 4142 N. River St., Arlington, Virginia 22207.

## SERVICES

MAKE YOUR WILL. Why delay? Receive 4 Will Forms and a 64-page booklet, "WILLS—How To Make and How To Break Them", written by an attorney. Just send $1.50 to Legal Forms Company, Dept. 529, 1830 Guardian Building, Detroit, Michigan 48226. (Satisfaction guaranteed.)

## POSITIONS WANTED

POSITION WANTED: Physician, 38 years of age, with several years of training and experience desires part-time work in the D.C. area in emergency room, etc. Please reply in care of Medical Annals of the District of Columbia, 2007 Eye St., N.W., Washington, D.C. 20006.

POSITION WANTED: Internist, 46 years old, Board Eligible. Two Years Fellowship in Cardiology and Assistant in active Cardiopulmonary Lab. Desires to locate in The District of Columbia. Full or Part-time. Write William E. Sill, Jr., M.D. in Faulkner, Maryland. Licenses in Maryland and D.C.

## REAL ESTATE

FOR SALE: Henlopen Ave., Rehoboth Beach. 4 bedrooms, 2 baths. Air conditioned, all electric, all appliances, all conveniences for family. contact Dr. D. Starr, (202) Ad2-2696.

FOR RENT: St. Thomas, Virgin Islands, Sapphire Bay. Modern Apartment on one of the world's prettiest ocean beaches. Glorious sunning, swimming, snorkeling, boating, tennis. For rent by day (4 day minimum), week or month. Full kitchen; maid and linen service. Reasonable rent. Assure yourself of real vacation weather. Write or call owner: Paul Cooper, 7112 Armat Drive, Bethesda, Maryland 20034; (301) 654-3131 (day), 365-7112 (evening).

MARYLAND: BETHESDA-CHEVY CHASE. WHAT A WAY TO GROW! Modern residence plus complete suite of luxury offices containing 1,400 sq. ft. Easy access to unlimited parking. Outstanding location with excellent potential. $12,000 will handle. Colquitt-Carruthers, Inc. Realtors. (301) 652-0001 until 9:00 p.m.

# INDEX OF ADVERTISERS

## These Advertisers Support Your Journal.
## Please Give Them Your Support.

| | *Page* |
|---|---|
| **Automated Medical Service** | |
| HEALTH AUTO-DATA, INC. | T-620 |
| **Bank** | |
| NATIONAL BANK OF WASHINGTON | 2 |
| **Business Counseling** | |
| DATA MEDICS | 24 |
| **Dietetic Products** | |
| CAMPBELL SOUP COMPANY | T-599 |
| DAIRY COUNCIL OF GREATER METROPOLITAN WASHINGTON, D.C. | 18 |
| **Insurance** | |
| MCDERMOTT INSURANCE, INC. | T-627 |
| MUTUAL OF OMAHA | 3-C |
| RUSSELL, MARSH & KENNEDY | 24 |
| **Equipment and Supplies** | |
| KLOMAN SURGICAL SUPPLY COMPANY | 11 |
| **Nurse Registries** | |
| ASSOCIATION OF UNDERGRADUATE AND PRACTICAL NURSE REGISTRY | T-628 |
| DISTRICT OF COLUMBIA MANPOWER ADMINISTRATION | 11 |

**T-text**

| | *Page* |
|---|---|
| **Pharmaceuticals** | |
| ARCH LABORATORIES | 11 |
| BRISTOL LABORATORIES | T-606, 12–13, 14 |
| BURROUGHS WELLCOME | T-603, 15 |
| GEIGY PHARMACEUTICALS | 4 |
| ELI LILLY & COMPANY | 8, 621 |
| MERCK, SHARP & DOHME | 16–17 |
| NATIONAL DRUG | 27, 28 |
| W. P. POYTHRESS | 19 |
| RIKER LABORATORIES | 6–7 |
| A. H. ROBINS COMPANY | T-622–623, 9, 10 |
| ROCHE LABORATORIES | 2-C-1, 4-C |
| G. D. SEARLE | T-600–601 |
| E. R. SQUIBB & SONS | T-624 |
| STUART PHARMACEUTICALS | T-602 |
| THE UPJOHN COMPANY | 20–22, 23 |
| USV PHARMACEUTICALS | T-604–605 |
| **Pharmacies** | |
| MAXWELL & TENNYSON | 24 |
| PEOPLES DRUG STORES | 23 |
| **Sanitariums** | |
| KALORAMA CONVALESCENT HOME | 11 |

# The girth control pill

# Tepanil® Ten-tab®

(continuous release form)

## (diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

**Contraindications:** Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

**Warning:** Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

**Adverse Reactions:** Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-107/4/71/U.S. PATENT NO. 3 001 910

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

# Painful night leg cramps...

## unwelcome bedfellow for any patient—including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

**Prescribing Information—Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

**THE NATIONAL DRUG COMPANY**
DIVISION OF RICHARDSON-MERRELL INC.
**PHILADELPHIA, PENNSYLVANIA 19144**

Q103 2/71

# Quinamm™

(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

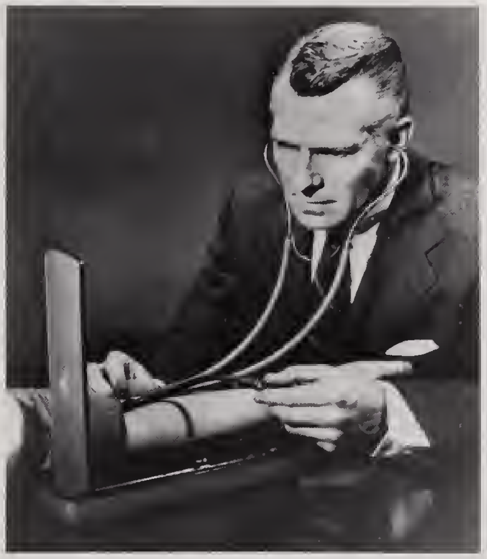
Doctor!

# Your Medical Society's Disability Income Plan Can Pay You Up To $225.00 a week

when you're sick or hurt
and can't work!

at's right! The disability income
n available to you as a member
the Medical Society of the Dis-
t of Columbia can pay you an
ome to live on when an unex-
cted sickness or accident cuts off
ur income. Can send you checks
up to $225.00 a week to pay
grocery bill, the house payment
any of the numerous other ex-
nses that continue whether you're
le to practice or not.

This is TAX-FREE CASH —
h paid direct to you to use as
u see fit. These benefits are paid
gardless of any other coverage
u have. What's more, your policy



is guaranteed renewable while the program remains in force regardless of the amount of benefits paid to you or any future changes in your health.

You'll be surprised how little this fine protection costs you, too. Thanks to the mass purchasing power of the Society, you are able to purchase this protection at special rates that save you money.

So get all the facts on this outstanding plan of protection today. Complete and mail the coupon below. You'll receive full details without obligation.

UNDERWRITTEN BY
Mutual of Omaha®
*The Company that pays*

Life Insurance Affiliate:
United of Omaha

**Joseph E. Jones, Administrator**
**1666 Connecticut Avenue, N.W.**
**Washington, D. C. 20009 Phone (202) 483-3100**

Please rush me free facts on the special Disability Income Protection plan available to me as a member of the Medical Society of the District of Columbia.

Name____________________

Address____________________

City__________ State__________ ZIP__________

# anxiety: a time bomb

Unless "defused," anxiety may build up to an intensity that can overwhelm the patient's inner defenses. Also, in one weakened by chronic illnes or surgery, excessive anxiety may provoke or aggravate symptoms and interfere with recovery.

The antianxiety action of Librium (chlordiazepoxide HCl)—used adjunctive or alone—has demonstrated clinical usefulness in many fields of medical practice where anxiety complicates the patient's condition.

antianxiety

## Librium®
(chlordiazepoxide HCl)
5-mg, 10-mg, 25-mg capsules
up to 100 mg daily for severe anxiety

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies ma be present and protective measures nec essary. Variable effects on blood coagula tion have been reported very rarely i patients receiving the drug and oral anti coagulants; causal relationship has n been established clinically.

**Adverse Reactions:** Drowsiness ataxia and confusion may occur, espe cially in the elderly and debilitated. Thes are reversible in most instances by prope dosage adjustment, but are also occasion ally observed at the lower dosage range In a few instances, syncope has been re ported. Also encountered are isolated i stances of skin eruptions, edema, min menstrual irregularities, nausea and co stipation, extrapyramidal symptoms, i creased and decreased libido—all infr quent and generally controlled with do age reduction; changes in EEG pattern (low-voltage fast activity) may appe during and after treatment; blood dyscr sias (including agranulocytosis), jaundic and hepatic dysfunction have been r ported occasionally, making period blood counts and liver function tests a visable during protracted therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche I
Nutley, N.J. 07110

*Volume 40 · Number 10 · October 1971*

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
15 DEC 1971

# Medical Annals of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

## DEPARTMENT OF HUMAN RESOURCES NUMBER

**Health Care for War Demonstrators in Washington**
Charles R. Hayman, M.D. and Mary J. Berkeley

**Trends in Laboratory Diagnosis of N. Gonorrhoeae**
Rose M. S. Breen, B.S., M.T.

**Post-Stroke Rehabilitation of Hospitalized Elderly Patients**
Amelia A. Hoff, R.N.

**Change in Traditional Institutional Management to Therapeutic Community**
Rose G. Amberg, R.N.

**Gastrobronchial Fistula**
Bela Gondos, M.D., Halappa G. Hakkal, M.D.,
and William P. Walker, M.D.

**Achlorhydria in Alcoholics**
Leo B. Janis, M.D.

**Glenn Dale Hospital: Rehabilitation Center**
Tumkur Madhu, M.D. and Moe Weiss, M.D.

**Health Services Branch**
Z. Ozella Webb, M.D.

Therapist teaching a quadri-lateral congenital amputee manipulative dexterity in the Community Health Services Administration's Crippled Childrens Clinic located at D.C. General Hospital. How well he fits into this world depends upon the efforts of many people.

# Patients fell asleep quickl

Dalmane (flurazepam HCl) 30 mg reduced awake time—both before and after falling asleep - by fifty percent of pretreatment values in patients with insomnia.[1,2]

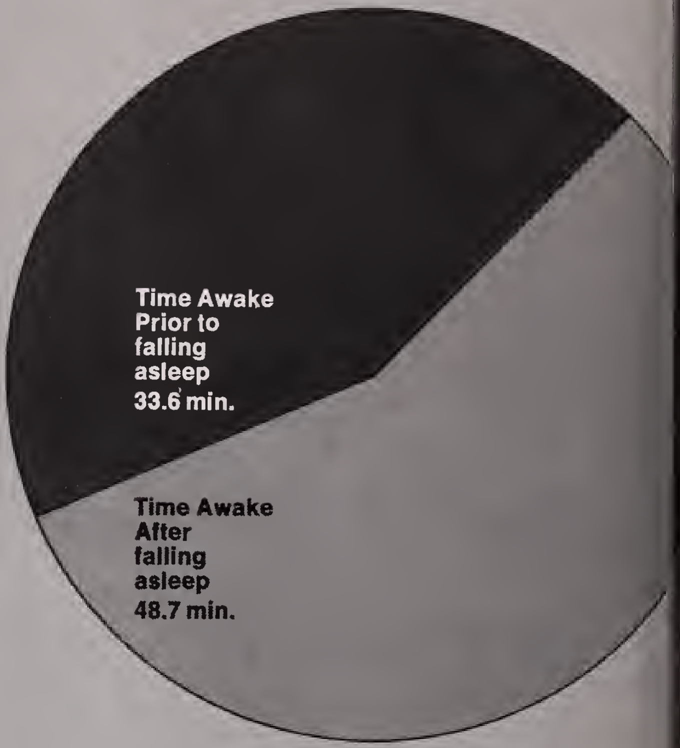
Two sleep laboratory studies recently confirmed findings of earlier studies of this type, namely, that Dalmane 30 mg was effective in patients who had trouble falling asleep, staying asleep or both. One 30-mg capsule of Dalmane usually induced sleep within 22 minutes, decreased the number of awakenings and the wake time after the onset of sleep, and provided 7 to 8 hours of sleep without need to repeat dosage during the night.

These studies utilized identical protocols and included eight insomniac patients. Sleep laboratory measurements in a limited number of patients are derived from all-night electroencephalographic, electro-oculographic and electromyographic tracings. Unlike traditional methods of evaluation, they are quantitative, reproducible and projectable to large numbers of subjects.

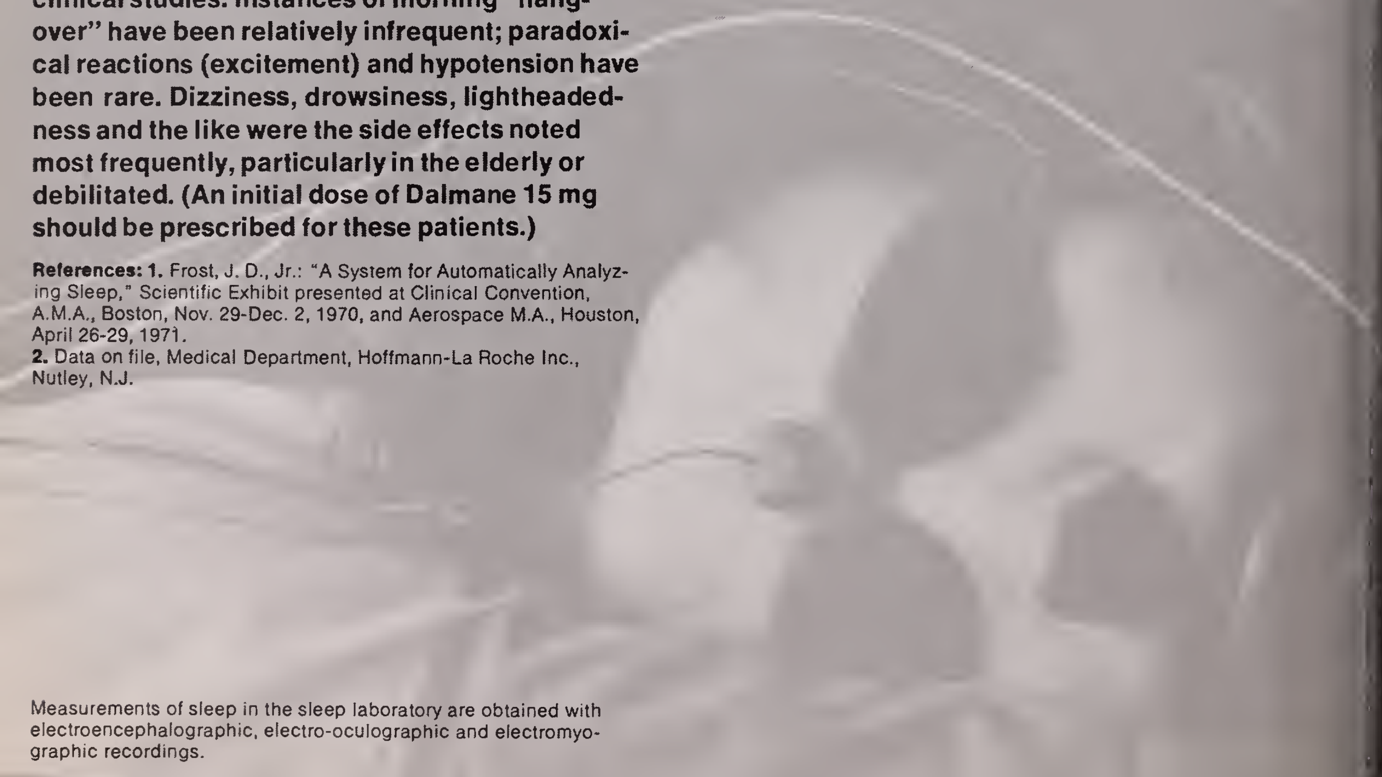
Results shown represent average values in all subjects for the three consecutive nights of placebo administration prior to Dalmane therapy and the seven consecutive nights on Dalmane 30 mg.

Dalmane is also relatively safe, as reported in clinical studies. Instances of morning "hangover" have been relatively infrequent; paradoxical reactions (excitement) and hypotension have been rare. Dizziness, drowsiness, lightheadedness and the like were the side effects noted most frequently, particularly in the elderly or debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

Before Dalmane (flurazepam HCl)



**References: 1.** Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.
**2.** Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.



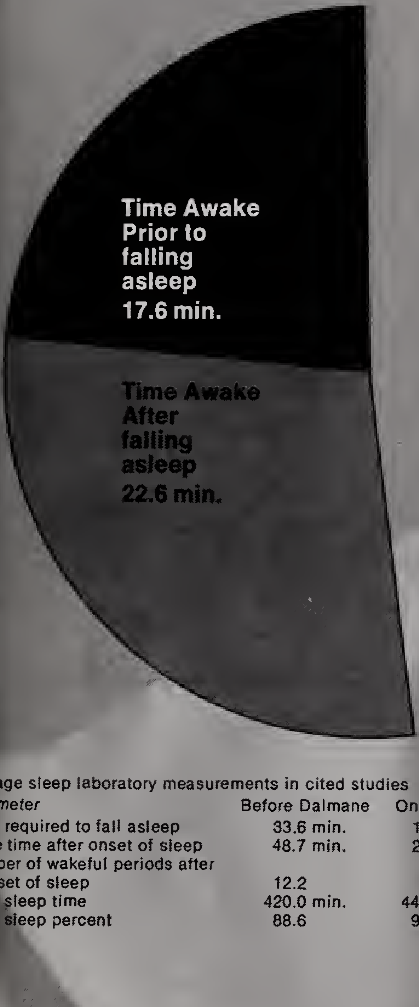
Measurements of sleep in the sleep laboratory are obtained with electroencephalographic, electro-oculographic and electromyographic recordings.

# and slept through the night

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

15 DEC 1971

**On
Dalmane
(flurazepam HCl)**



rage sleep laboratory measurements in cited studies

| ameter | Before Dalmane | On Dalmane |
|---|---|---|
| ne required to fall asleep | 33.6 min. | 17.6 min. |
| ke time after onset of sleep | 48.7 min. | 22.6 min. |
| mber of wakeful periods after nset of sleep | 12.2 | 8.4 |
| al sleep time | 420.0 min. | 447.5 min. |
| al sleep percent | 88.6 | 94.5 |

## inical effectiveness as oven in the sleep laboratory

## almane®
## lurazepam HCl)

**e 30-mg capsule h.s.—usual adult dosage.**
**e 15-mg capsule h.s.—initial dosage for
erly or debilitated patients.**

**Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

"Healing is a matter of time, but sometimes also of opportunity."

Hippocrates, *Precepts*, Chapt. I

**and so is money-management**

After an initial exploratory examination of your finances by The National Bank of Washington, we can prescribe a course of action that will ensure your fiscal health through good times and bad.

Do you want to prepare for your family's security? There are all kinds of trusts and investments that can be established to suit your particular wants and needs.

Do you want to start a college trust fund to provide for your children's education at a time in your life when you might want to slow down? Our Trust Department knows just how to help you to do this.

How much should you invest in stocks and bonds? Our Investment Department won't give you a rule-of-thumb, but it will give you a plan as individual as you are.

Is the chore of day-to-day banking taking too much of your time or the time of your professional staff? Our bank provides you with prepaid, self-addressed envelopes that allow you to handle your checking or savings accounts right at your desk—at no cost to you.

Are you tired of paying monthly service charges on your checking account? At The National Bank of Washington, if you maintain a minimum balance of $300 in your regular personal checking account, there are no service charges.

Do you want to buy some special professional equipment, attend an international medical meeting overseas, buy another car or boat? At The National Bank of Washington you can get a consumer loan for a mere 8% annual percentage rate.

For *any* questions on money management, consult The National Bank of Washington. Twenty convenient locations. Main office: 14th and G Streets, N.W. 624-3000. Member FDIC.

The National
**BANK OF
WASHINGTON**

**VOLUME 40 • OCTOBER 1971**

**EDITOR**
Wallace M. Yater, M.D.

**ASSOCIATE EDITOR**
Raymond Scalettar, M.D.

**ASSISTANT EDITOR**
Judith E. Perruso

**MANAGING EDITOR**
Francisco P. Ferraraccio

**EDITORIAL BOARD**
Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**
Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Leslie E. Hedgepath, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

# MEDICAL ANNALS
of the
# DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to the Editorial Offices, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

OU-7019

# Who's afraid of the big bad enema?

**We all are.** But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can — except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents" and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

**Dulcolax®...it's predictable**
bisacodyl

GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 UNDER LICENSE FROM BOEHRINGER INGELHEIM G.M.B.H.

MEDICAL ANNALS
of the District of Columbia

# Contents for October

## DEPARTMENT OF HUMAN RESOURCES NUMBER

## SCIENTIFIC ARTICLES

Health Care for War Demonstrators in Washington, April–May, 1971. *Charles R. Hayman, M.D.* and *Mary J. Berkeley*, Washington 633

Present Trends in the Laboratory Diagnosis of N. Gonorrhoeae. *Rose M. S. Breen, B.S., M.T.*, Washington 638

A Post-Stroke Success Story in the Rehabilitation of Hospitalized Elderly Patients. *Amelia A. Hoff, R.N., B.S.N.E., M.S.*, Glenn Dale, Maryland 640

From Traditional Institutional Management to the Therapeutic Community Concept: One Hospital's Approach to Change. *Rose G. Amberg, R.N., B.S., P.H.N., M.S.*, Glenn Dale, Maryland 644

Gastrobronchial Fistula: Report of a case and review of the literature. *Bela Gondos, M.D., Halappa G. Hakkal, M.D.*, and *William P. Walker, M.D.*, Washington 649

Achlorhydria in Alcoholics. *Leo B. Janis, M.D.*, Occoquan, Virginia 654

Glenn Dale Hospital: A Rehabilitation Center. *Tumkur Madhu, M.D.* and *Moe Weiss, M.D.*, Glenn Dale, Maryland 654

Health Services Branch. *Z. Ozella Webb, M.D.*, Washington 655

## EDITORIALS

Physician's Leadership in the Decade of the 70's 671

A Key to Successful Preventive Medicine 673

## MISCELLANY

President's Page: "HMO's—What's it all About?" 669

D.C. Health Notes: "Language Development Program" 681

Clinical Center Study 682

D.C. Mental Health Administration: "The Alcoholic Detoxification Center" 683

General News 684

Book Reviews 686

*Medical Annals Staff and Officers of the Medical Society* *Adv. 3*

*Classified Advertisements* *Adv. 25*

*Index of Advertisers* *Adv. 26*

---

Copyright ©, 1971 by The Medical Society of the District of Columbia. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

KONSYL
REG. U.S. PAT. OFF.
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
PLANTAGO OVATA COATING
MADE BY BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 12 OZ.
L.A. FORMULA
REG. U.S. PAT. OFF.
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
(Plantago Ovata Coating Dispersed in 50% dextrose.
A natural vegetable powder for treatment of constipation and non-specific diarrhea.
MADE BY BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 14 OZ.

Sugar-free medication for the obese patient.

For the patient who requires maximum palatability.

the safe,
effective ways to promote
normal peristalsis

*in the treatment of constipation or diarrhea*

**Burton, Parsons & Co., Inc.** *Manufacturers of Ethical Pharmaceuticals Since 1885*
▪ WASHINGTON, DC. 20027 ▪ MONTREAL, CANADA ▪ MUNICH, GERMANY

# WHEN TRAUMA RESULTS IN PAIN...

otograph
way implies
dorsement
gesic
e Namath

**rgesic . . . provides effective analgesia and relief of associated muscle spasm**

**Contraindications:** Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.

Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).

**Warnings:** USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.

**Precautions:** It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.

**Adverse Reactions:** Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established. **Dosage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

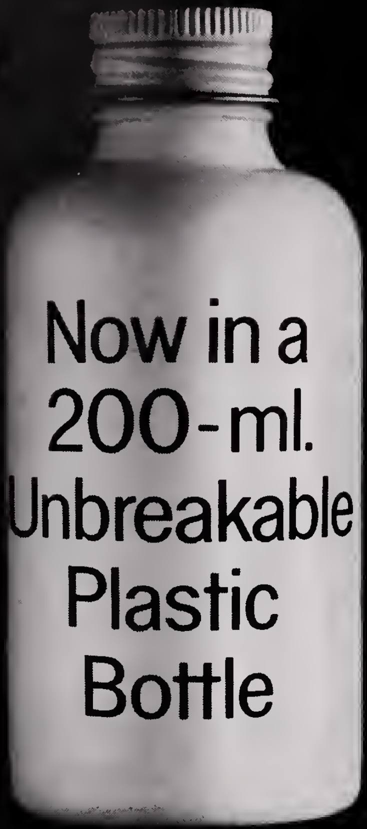
**Riker Laboratories, Inc.**
NORTHRIDGE, CALIFORNIA 91324

A SUBSIDIARY OF 3M COMPANY

# NORGESIC®

(orphenadrine citrate, 25 mg., aspirin, 225 mg., phenacetin, 160 mg., caffeine, 30 mg.)

**the versatile analgesic**



Now in a
200-ml.
Unbreakable
Plastic
Bottle

Same price as
150-ml. size*

Two dosage
strengths–
125 mg./5 ml.
and
250 mg./5 ml.

V-Cillin K®, Pediatric

potassium
phenoxymethyl
penicillin

Lilly

100210

*Additional information available to the profession on request.*

Eli Lilly and Company
Indianapolis, Indiana 46206

**Based on Lilly selling price to wholesalers.*

MEDICAL ANNALS
of the District of Columbia

October 1971
VOLUME 40 • NUMBER 10

Department of Human Resources Number

This is the fourth in a seventh series of special numbers of the MEDICAL ANNALS, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan area. For the DEPARTMENT OF HUMAN RESOURCES NUMBER the Editorial Board is indebted to Mr. Robert H. Conn, Deputy Director, Office of Public Affairs, D.C. Department of Human Resources and President, Conference of State and Territorial Directors of Public Health Information, who secured the papers which appear in this issue.

# Health Care for War Demonstrators in Washington, April–May, 1971

## A Comparison with the Riot and "Resurrection City" of 1968

CHARLES R. HAYMAN, M.D.* AND
MARY J. BERKELEY†

WASHINGTON, D. C. has not experienced a disaster within decades but has been the scene of numerous events for which mass health services have had to be provided. Most of the events have been directed toward the Federal Government, but police, health and other essential services have been mainly provided by the City.

These events ranged all the way from the annual Cherry Blossom parade to the week-long riot of 1968. The events in April-May 1971 fell in the middle of this spectrum. These were the demonstration, rally, and rock concert on April 24; the Vietnam Veterans Encampment April 19 through 24; the pre "May Day" Encampment April 25 through May 2; the May Day demonstrations and arrests May 3 through 7; and the March for Victory on May 8.

Some of the factors affecting mass health care will be outlined and applied to the events of 1971, with comparison to the Riot and the Resurrection City encampment of 1968. The factors considered are:

*Advance planning.* Was there enough information to plan for the event, did planning include that for health care, who did the planning, and how much lead time was there?

*Nature of the event.* Was this a peaceful assembly, disruptive demonstration, or violent riot; and was it aimed at the Federal Government?

*Duration.* How long did health care have to be provided?

*Number of participants per day.* What was the number of potential patients per day, mostly active participants or demonstrators, but also police and onlookers?

*Characteristics of participants.* What was their age, residency, socio-economic status, race, and pre-existing health and habits, particularly use of drugs?

*Nature of the environment.* Were assemblies in the open or in confined spaces; was there exposure to cold or heat; was there adequate water for drinking and washing; adequate food preparation and nutrition, toilet facilities, sewage and garbage disposal, and personal space?

*Injuries and disease.* Which injuries were expected and encountered and in what number and severity; which diseases were expected and encountered, and were they pre-existent or new?

*Health resources and facilities.* Which medical and allied personnel and facilities were mobilized and in what number; were they official or volunteer, hospital or other facility; and were they optimally used, overtaxed, or under-utilized?

---

*Associate Director for Preventive Services, Community Health Services Administration, 1875 Connecticut Avenue, N.W., Washington, D. C. 20009.

†Assistant Chief, Division of Health Mobilization, Community Health Services Administration.

## The Riot of April 1968

This event was essentially spontaneous with little information for prior planning; however, since it followed closely on riots in other cities, there was lead time of a few days in which the Department of Public Health was able to mobilize official and volunteer help.

There was extensive burning and looting, but few confrontations between rioters and police, and though tear gas was used, there was little shooting. The demonstrations were diffusely aimed at the policies of the Federal Government, less at the District's, with much looting, not hostile but opportunistic. The riot lasted a week, with 5-10,000 active participants each day, thousands of policemen and National Guardsmen, and throngs of onlookers and sight-seers.

The active participants were predominantly black ghetto residents, especially young adults and teenagers, some using hard drugs, few with emotional disturbances, but many with pentup frustrations.

Most of the action took place outdoors, and many edifices were destroyed or damaged, but occupants were able to find shelter with relatives and friends. Some stocks of food were embargoed, but supplies were plentiful. There was expectation of serious illness with outbreaks of infection, but little was encountered. It was not possible to emplace aid stations, and patients were transported by car or ambulance to various hospitals, where about 1000 were treated for injuries and 200 for diseases related to the event, 7 were dead on arrival, and 107 were admitted of whom 2 died.*

Medical care was provided by the Department of Public Health, with the assistance of the Medical Societies of the District of Columbia, the Washington Chapter of the Medical Committee for Human Rights (MCHR), the District Chapter American Red Cross, and the voluntary hospitals. Especially in the affected areas residents who were on prescriptions had a difficult time until arrangements were worked out with a drug chain.

None of the health facilities were taxed, and the main problems were in implementing hospital plans for mobilization and utilization of teams, and difficulties of the Department in transporting hospital personnel around the affected areas from home to hospital and back.[1]

## Resurrection City

In contrast, the Poor Peoples' March and the Resurrection City encampment were well planned events with advance notice of about 2 months. There were many meetings initiated by the Department of Public Health and the "Health Services Coördinating Committee". † Federal agencies particularly involved were the National Park Service and the medical units of the D. C. National Guard and the Military District of Washington.

The encampment at West Potomac Park was essentially peaceful, although daily demonstrations were carried out against the Federal Government. It lasted for 6 weeks, with about 2000 persons in camp daily, until forcibly closed on June 24. The campers were family groups of young adults with many children and some oldsters who were practically all-black non-residents from Southeastern states, many from rural areas. A significant number were malnourished and had chronic disease associated with low socio-economic status and lack of health care and dental neglect was very evident.

Although the open camp was not crowded and temperatures were moderate, incessant rains through May inundated the site, and the quagmire aggravated inadequate toilet and garbage facilities. Hand-washing and bathing were absent for several weeks, and while food was prepared and transported from Howard University, facilities for handling and storage were deficient.

Many accidental injuries were expected and encountered, for example, lacerations from glass in the Reflecting Pool, used for washing and wading, but few were serious. Many chronic medical and dental conditions were encountered as expected, but acute respiratory and gastro-intestinal infections did not appear in the numbers or severity feared.

Medical and dental services were provided in trailers emplaced by the Department of Public Health, the U. S. Public Health Service, and the Seventh Day Adventists, staffed by volunteer personnel obtained and directed by the Health Services Coördinating Committee, assisted by Department staff.

On June 19 for "Solidarity Day", 7 additional stations were located in the march area, provided by the Department, the Army, and the Red Cross. Nine hundred and twelve persons were treated in the stations, 29 were referred to hospitals, and 3 were admitted.

---

* Hospital admissions included 20 for gunshot wounds, 20 for fractures, 17 for stab wounds, and 2 for tear gas.

† Medico-chirurgical and Medical Societies of D. C., Freeman and Dental Societies of D. C., M.C.H.R., Seventh Day Adventists, Red Cross, St. Lukes Physicians Guild, Howard University, and Health and Welfare Council.

For the 6 weeks, 3840 patient visits were reported from the trailers, with 619 patients referred to hospitals and 23 admitted. On the whole, primary medical and dental care were satisfactory, the primary facilities were well utilized, and hospitals were not taxed.[2-4]

### Demonstration, Rally and Rock Concert, April 24, 1971

These events were well planned with 1 month's notice. The District and Federal agencies concerned with the logistics, including health care, met 2 to 6 times with the sponsor, the National Peace Action Coalition, and its medical arm, the MCHR. Services were planned for about 50,000 and with additional information for 250,000.‡

The march and rally, aimed at the war policies of the Federal Government were very peaceful with only 25 arrests. At the height of the rally an estimated 250,000 were jammed in the area immediately west of the Capitol. The participants were predominantly middle-class teenagers and young adults, 99% white, and apparently physically healthy. There was much evidence of prior and present drug use, especially marijuana, with some LSD, heroin, methadone, amphetamine and barbiturates.

Evnironmental conditions were adequate, only because of the short duration. The weather was warm and sunny. National Park Service and Community Health Services Administration (Community Health) had augmented fixed installations with portable water bubblers and toilets which were severely taxed.

Few severe injuries were expected or encountered, although there were many minor lacerations. Many persons as expected had headaches, nausea and cramps from fatigue, insufficient food, and the like. However, the extent of drug use was unexpected, with many physicians not trained to cope with reactions of excitement or depression, to diagnose adulteration (LSD presumably adulterated with strychnine), or to treat withdrawal symptoms.

Medical service was provided in aid stations emplaced by Community Health, staffed by physicians and nurses from the Department of Human Resources and the Public Health Service. MCHR physicians and "medics" circulated among the crowd and rendered much assistance.

The rock concert all night was attended by about 50,000 young people, many of whom camped over. Medical service mostly for drug-related episodes was given by MCHR in mobile stations provided by Community Health and Narcotics Treatment Administration.

For the 24 hours, about 1100 persons were treated for minor ailments, including 135 for drug-related conditions, 14 were referred to hospitals, and 1 was admitted and died several days later of cardiac arrest. On the whole, medical personnel and facilities were well mobilized and utilized, and were not overtaxed.

### Vietnam Veterans Against the War—April 19-24

There was no information given to Community Health on which to plan for the encampment. Fortunately this was peaceful, although there were disruptive demonstrations carried out at Federal Government buildings, with about 50 arrests. Approximately 1500 "Veterans" camped for 5 days at West Potomac Park; they were young adults, practically all white, non-residents from middle and lower socio-economic levels.

Environmental conditions were adequate only because of the small number involved, with portable water and toilets supplied by the National Park Service. Few major injuries or illnesses were expected or encountered, and there were some drug-related disorders.

Medical care was given by the MCHR, assisted by physicians and ambulances provided by the Department and the George Washington University Hospital Emergency Rooms (GW). No resources or facilities were taxed.

### The Pre-"MayDay" Encampment—April 25-May 2

There was practically no planning for health care or other services, since this was apparently an undirected accretion of young people staying over from the April 24 events, augmented by similar non-residents coming in preparation for "May Day".

The camp-in was essentially peaceful, and although there were several exhortations against the Government's anti-war policies, most of the time was spent in social intercourse, "pot" smoking, and listening to rock music. The assembly grew over 7 days to an estimated 50,000, mostly middle class teenagers and young adults, 99% white. However, the presence of many young adults of lower socio-economic status was noted, some with signs of emotional disturbance, with and without drug use, and a few almost professionally inciting and agitating.[5]

---

‡ District Departments—Human Resources (Administrations for Community Health Services, Hospitals and Medical Care, Mental Health, Narcotic Treatment and Social Services), Police, Fire, Highways, Sanitary Engineering, National Guard and Civil Defense.

Federal Agencies—National Park Service, U.S. Public Health Service; General Services Administration, Military District of Washington.

Volunteer Organizations—Medical and Medico—Chirurgical Societies of D. C.; George Washington University Hospital.

Environmental conditions were poor and steadily worsened. The weather fortunately was sunny, though cool at night. Tanks of water for drinking and portable toilets were added by the Park Service, but these were severely taxed. There was no evidence of hand-washing, food was prepared on site, and space decreased to about 34 square feet per person.

Much drug-related illness was seen as now expected, but most other medical conditions were minor. Cases of scarlet fever and other respiratory infections were rumored but not reported, and although gastrointestinal infections were feared, no widespread or serious outbreak occurred. One young woman was raped, but there were few other serious traumas.

Primary care was provided in tents provided by the participants, with a few physicians supplied by MCHR, later by Community Health, and by many untrained participant "medics". Ambulances were provided by the Department. Several hundred patients were brought to GW a few blocks away and there handled without difficulty.

The main problem noted was that many drug reactors with excitement were unnecessarily brought to the emergency room, and many with respiratory depression were treated on site.[5] About 1500 patients were treated at the camp site and GW, with no hospital admissions and no deaths.

### "May Day" Demonstrations—May 3 thru 7

Again, little health planning was possible for lack of definite information. The news media gave several days' warning that the demonstrators intended to tieup traffic starting May 3 to disrupt operations of the Federal Government, and 2 medical aid stations were in place that morning, but there was no indication that about 20,000 demonstrators would be engaged, with 7000 arrested on the 3rd, and 4000 on the 4th and 5th.

The events were purposely disruptive, but the actions and police reactions were with few exceptions not violent. Those arrested were the same teenagers and young people, white middle-class non-residents, with a scattering of older bystanders and onlookers caught in the mass arrests.

The prisoners were taken to a football practice field, then to the jail courtyard for about 6 hours, then to the Washington Arena where many were held from 24 to 36 hours, and then for processing at the District Court cellblock, where they were held from 6 to 24 hours.

During the 5 days, fewer injuries were encountered than expected, and drug use and reactions were diminished, although some of those under arrest needed Methadone which had to be obtained on individual prescription. Physicians and nurses supplied by the Department and the Public Health Service treated about 1500, mostly for minor complaints, with several hundred referred or first seen at hospitals, and only 1 admission, for hepatitis. Since there was no screened place for examination at the detention centers and some patients sent back from the emergency rooms could not be followed satisfactorily, a holding ward with minimal staffing was opened on May 6 at D. C. General Hospital for 6 patients.

Environmental conditions were very poor, especially at the Arena and the Cellblock. Water supply was inadequate, bologna sandwiches were the main fare, toilet facilities were overtaxed, blankets were supplied late, and space per prisoner decreased to 4 square feet. No outbreak of communicable disease occurred; nevertheless, because of these conditions, 750 of 1000 in the cellblock were released on May 7, by order of the Superior Court.[6]

### March for Victory—May 8

In contrast, this was a well-planned event with 10 days' notice and several meetings between designated representatives of the sponsor with the health, police and other agencies concerned.

Preparations were made for a crowd of 25,000 to 50,000, but only 3,000 marchers appeared. This was an entirely peaceful assembly of white middle-class family groups, with many children and older persons, which only lasted 6 hours. Two aid stations were emplaced and staffed by physicians and nurses from the Department, who treated only 6 patients.

### Comment

The above events illustrate a few of the possible variations, from the short, small-size peaceful assembly with time and information to plan for health care, to the long, large, violent riot, with little or no time or information for planning. None of these episodes approached the critical situation of natural disasters, but the next may.

The factors described and analyzed in each event are interdependent; for example, a large number of participants may be counter-balanced by the peaceful nature of an event to minimize injuries. However, one combination of factors did not produce the expected outcome. Poor environmental conditions over a long period did not result in outbreaks of reported respiratory or gastrointestinal infections. Possible containing factors were: 1) immunity developed through previous exposure (many "Poor People" and "Young People" may have become protected through poor sanitary practices as individuals, members of small groups, or in large gatherings); 2) quick response to medications including antibiotics may have broken the chain of infection; and 3) poor reporting by physicians and their organizations may have understated the incidence, but we know that few serious cases were encountered.

Since advance information is often sparse, and may be withheld, and disasters may occur without warning, there is a need for constant planning. This means keeping up to date the plans for hospitals and other health facilities, for agencies and volunteer organizations, and for the whole community.

Teams of doctors, nurses, aides, and support personnel need to be designated and re-designated, and receive special training in the operation of aid stations, emergency equipment, drug-related disorders, tear gas, and the like.

### Mobilization of Community Resources

This depends on prior planning and training. Large, disruptive events cannot be handled by health agencies alone, and volunteer help from medical societies and health related organizations must be well planned and coördinated.

Few major injuries occurred because there was practically no use of weapons and no accident involving large numbers, but since both may occur aid-station and hospital personnel need to be prepared for mass casualties.

Drug use has been an increasingly important factor, with need to treat many young persons who have been prior users, presenting the effects of overdoses, reactions, and withdrawal. Diagnosis is difficult since the user usually does not know the ingredients or strength of illegal drugs, and guidelines for emergency treatment need to be standardized and published widely.

Most patients were treated in the primary aid stations, with less than 10% needing hospital emergency facilities and less than 2% needing hospitalization. A holding station should be established early, in a unit with minimal medical and nursing care, when one can foresee the need for patient observation and re-treatment.

### Environmental Conditions

Since mass arrests will recur if disruptive events continue, provision must be made by Departments of Police and Corrections to provide detention facilities with adequate space, ventilation, temperature, water, food and toilets. There is always the possibility of an outbreak of infection, or of panic and mass casualties.

### Summary

Washington, D. C. has been the scene of many events in recent years directed at the Federal Government, for which health care has been provided by the District Government, with much needed assistance from Federal and volunteer health organizations.

The war-related events of April-May 1971 ranged from short, peaceful, small assemblies to long, disruptive, large disturbances. These were compared with the Riot and "Resurrection City" of 1968, describing these factors for each event: advance planning, nature of event, duration, participants per day, characteristics such as age and residence, and environmental and sanitary conditions. These factors were related to injury and disease expected and observed, and to mobilization and utilization of health services and facilities.

Advance planning for each event is not always possible, so that general planning and constant training are essential. Plans must coördinate the use of governmental and voluntary organizations and facilities. Drug-related problems are increasingly prevalent and require guidelines and training for diagnosis and emergency treatment. While most of the factors operated as expected, poor sanitation, crowding, confinement and long duration did not produce outbreaks of respiratory or gastrointestinal infections.

### References

1. FRANK, A., ROTH, J., WOLFE, S. and METZGER, H.: Medical problems of civil disorders. New Eng. J. Med., 1969, 280, 247.
2. GRANT, M: Health services for the Poor Peoples' Campaign. Public Health Rep., 1969, 84, 102.
3. BILLINGS, G.: Health care in Resurrection City. Amer. J. Nurs., 1968, 68, 1695.
4. WEBB, H.: Dentistry at Resurrection City. J. Dent. Soc. D. C., 1968, 43, 11.
5. PIEMME, T.: Remarks at Conference on Medical aspects of "MayDay", June 15, 1971, Medical Society of District of Columbia.
6. BELSON, J.: Order of the Superior Court of the District of Columbia, Civil Division, SP 49-71, May 7, 1971.

# Present Trends in the Laboratory Diagnosis of N. Gonorrhoeae

ROSE M.S. BREEN, B.S., M.T.*

LESS than 5 years ago health officials and venereologists were of the opinion that gonorrhea infection was on the decline as a problem in the United States. This was partly the result of the effectiveness of a single therapeutic dose of 2.4 million units of a quick-acting penicillin. Today that dosage has in some cases been necessarily increased to as much as 6 million units when the organism has become resistant to the drug. The reasons offered for resistance are:

1. Presumptive diagnosis of *N. gonorrhoeae*, followed by inadequate dosage of penicillin.
2. Resistant strains of the organism introduced into the United States by troops returning from the Far East, according to reports from the World Health Organization.[1]

The Gram stain has long been accepted in the diagnosis of gonorrhoeae. The finding of Gram-negative intracellular diplococci in the stained exudate from defined loci is presumptively diagnostic. However, in early or chronic infections the organism may be found only extracellularly and frequently as a single coccus.

In men a presumptive diagnosis can be reached by finding intracellular gram-negative diplococci in the pus cells of the urethral discharge.

In women, diagnosis by Gram's stain becomes more difficult. The smears are of value in early infections when the typical intracellular diplococci are found in material taken from Skene's glands, the cervix, and Bartholin's glands. Even here, vaginal secretions tend to destroy the gonococcus. Many other organisms in the smear such as staphylococci, streptococci, coliforms, members of the tribe Mimeae, and other non-pathogenic Neisseria tend to complicate the microscopic diagnosis. Old staphylococci sometimes stain red, and gram-negative diplobacilli may be mistaken for *N. gonorrhoeae*. On the other hand, in treated cases, a diagnosis may be missed if the pus cells are disintegrated and the microörganisms are extracellular and few. Many state laboratories have refused to accept smears from females for the presumptive diagnosis of *N. gonorrhoeae* because of these difficulties.

Development of a culture technique as a better diagnostic method to replace the smear technique was deemed necessary. The main problems in culturing gonococci are:

1. The delicacy of the gonococcus. Its viability is usually lost unless it is plated on a suitable medium, usually of a chocolate agar base. Numerous liquid media have been used to transport the specimen from the patient to the laboratory with varying results.
2. The high frequency of microbial contaminants from vaginal secretions that tend to mask and overgrow the gonococcus.
3. The need for additional $CO_2$ for the primary isolation of the gonococcus.[2]

All of these problems have been satisfactorily solved by the development of a bottled medium containing $CO_2$ called Transgrow. This chocolate agar-base medium contains vancomycin, colistin and nystatin, additives that act as suppressants for most of the vaginal contaminants alluded to above, and permits unimpeded growth of Neisseria. Originally used in petri dishes in laboratories and clinics where $CO_2$ is available this Thayer-Martin medium derivative has been modified by Martin and Lester for use in the office of the practicing physician. This has been accomplished by increasing the agar and glucose contents of the original medium, dispensing it in flat, screw-capped bottles, and adding $CO_2$ to the bottle.[3] The problem of Proteus overgrowth encountered, especially in rectal cultures, has been overcome by the addition of the antibiotic Trimethoprim lactate.

In preliminary trials with Trimethoprim lactate added to Transgrow, spreading of 39 strains of Proteus was completely suppressed in 41 isolates studied, according to reports by Martin and Lester. The antibiotic does not seem to interfere with the growth of either *N. gonorrhoeae* or *N. meningitidis.*[4]

The advantage of Transgrow medium with $Co_2$ over other transport media are viability of pathogenic Neisseria for 48-96 hours at room temperature and in transportation, elimination of the need for subculturing in the laboratory to isolate gonococci or meningococci, and elimination of the need for a carbon dioxide incubator or candle jar.[2]

---

* Microbiologist, Bureau of Laboratories, D. C. Department of Human Resources, Community Health Services Administration, Preventive Services, 1875 Connecticut Avenue, N.W., Washington, D. C. 20009.

This medium is of distinct advantage to the physician because it keeps well for at least 2 weeks in the refrigerator. After inoculation the specimen may be held at room temperature until it can be mailed or delivered to the laboratory for incubation at 35°C.

Upon taking the specimen the physician or technician merely rolls the swab gently over the surface of the medium while holding the bottle in an upright position to prevent loss of the $CO_2$. The cap is then tightly replaced. Specimens received in the laboratory are incubated at 35°C for 16-18 hours.[2] If no growth is apparent after 18 hours the medium is returned to the incubator for an additional 24 hours. Those cultures which show growth typical of *N. gonorrhoeae* are tested for oxidase production. If postive, a Gram's stain is made. If gram-negative diplococci are seen, the culture is presumed positive for *N. gonorrhoeae.* The organism is confirmed by biochemical and fluorescent antibody techniques.

A high percentage of females are completely asymptomatic and are unaware that they are infected with gonorrhea. This carrier state provides a reservoir that serves to perpetuate the infection within the population.[5] The culture technique with Transgrow medium is highly effective in the diagnosis of this condition. Its routine use is urged.

## References

1. PALMER, MARVIN H., M.T.: The Importance of Confirmatory Tests in N. gonorrhoeae Diagnosis. Laboratory Medicine, March 1971.
2. Vacto-Transgrow Medium with Carbon Dioxide for Pathogenic Neisseria. Product Information, B.B.L., 0-429.
3. Clinical Laboratory Forum. August/September, 1970.
4. Clinical Laboratory Forum. March, 1971.
5. LUCAS, JAMES B., M.D., PRICE, ELEANOR V., THAYER, JAMES D., Ph.D., AND SCHROETER, ARNOLD, M.D.: The Diagnosis and Treatment of Gonorrhea in the Female. New Eng. J. Med., 1967, 281.

# A Post-Stroke Success Story in the Rehabilitation of Hospitalized Elderly Patients

AMELIA A. HOFF, R.N., B.S.N.E., M.S.*

"LOOK AT A PATIENT lying long in bed. What a pathetic picture he makes! The blood clotting in his veins, the lime draining from his bones, the scybala stacking up in his colon, the flesh rotting from his seat, the urine leaking from his distended bladder, and the spirit evaporating from his soul."

This depressing commentary was made by a British physician named Asher in 1947, as quoted by Dr. Milton Holtzman[1] in an article called "Deconditioning". Unfortunately, despite the great strides that have been made and the concepts of rehabilitation that have been developed, there are still too many patients "lying long in bed" who should be at least partially independent in activities of daily living. Many have or have had the potential to become wheelchair, ambulatory, or even to walk with or without such assistive devices as crutches, canes, braces, or walkers. A variety of factors contribute to the total picture. Among these are painful joints and lack of motivation on the part of the patient and the pressures of time and lack of knowledge regarding rehabilitation measures on the part of families or hospital personnel. Lee and others, in 1958, reported that among an unrehabilitated group of hemiplegics of long duration only 35% were eventually able to learn to walk, whereas 75-90% of persons suffering cardiovascular accidents have the potential to ambulate successfully.

In January 1960 our 600-bed hospital began to convert from care of tuberculosis patients only to include long-term care of patients with non-infectious chronic diseases. By 1965 6 of the nursing units, averaging 50 beds each, had been converted to non-infectious chronic diseases. We were experiencing the difficulties of trying to give total patient care to a much more handicapped and helpless group of patients with only a slight increase in staff. The charge nurses, supervisory nurses, and those responsible for staff and patient education attended courses in rehabilitation nursing at various rehabilitation centers, and the newly acquired techniques were taught to the personnel on the units. A workshop was developed around the care of the patient with a cardiovascular accident since the stroke patients demanded the whole range of nursing skills. Nursing personnel were assigned to attend on a rotating basis. Gradually but steadily we developed a nursing staff with the knowledge and skill to care for our diversified case load of patients.

The patients were getting excellent physical care, but the nursing staff became increasingly concerned about their apathy and lack of motivation. Many of them, especially the stroke patients who had been discharged from occupational and/or physical therapy as having received maximum benefit, were withdrawing from all social activities. They allowed the nurse to assume the responsibility for activities which were often easily within their capabilities, such as grooming, bathing, and dressing. They became less responsive to the needs and even the presence of other patients and staff. They preferred to stay in bed or slumped in silence in their chairs.

The nurses utilized bath time for ROM (range of motion) on the affected side, but the short staff did not lend itself to supervised ambulation and other activities which would maintain the functional level attained in Physical and Occupational Therapy. Hard-earned skills were being lost because they were not being used. About this time 1 of the nurses attended a rehabilitation nursing seminar and heard Mrs. Ruth Bier speak on "Motivation of the Chronically Ill Aged Patient." Mrs. Bier,[2] while working at Bird S. Coler Hospital in New York, had used a group technique to promote a program of exercise and socialization among a patient population similar to ours. Utilizing her limited staff, she had instituted a program which achieved positive results and became recognized by both staff and patients.

It was decided that the Instructor of Patient and Visitor Education for chronic disease should assume responsibility for establishing a program at this hospital. The first meeting of personnel preparatory to formulating a program of health education for the stroke patients was held in October, 1965.

The announced purpose of the meeting was to attempt to assess the more urgent needs of the CVA patient as seen by the unit personnel before attempting to set up a program. The head nurses of the chronic disease units were consulted 10 days prior to the meeting and asked to make some determination of the needs of their patients, as they saw them, and bring these observations to the meeting. Two outstanding needs were identified: Maintenance of maximum functional level in ADL (activities of daily living) following discharge from Physical Therapy and/or Occupational Therapy, and more opportunities to socialize.

---

* Instructor of Patient and Visitor Education for Chronic Disease, Glenn Dale Hospital, Glenn Dale, Maryland 20769.

The suggestion was made that some activity be developed on a unit basis which would promote ADL in a social milieu at the point where the patient is discharged from P.T. and/or O.T. as having received maximum benefit.

It was also suggested that tables be provided in the dayrooms and patients be encouraged to eat together.

One of the team leaders thought that each unit should choose 2 patient representatives to meet with the committee in order to explore patient perceptions of needs and to discuss program activities which might be useful tools in meeting those needs. If the patients had a part in planning the program, they might be more motivated to participate.

The combined patient and staff group met 2 weeks later. Each unit was represented by patients and personnel. The patients were briefed on the thinking and concerns of the staff, and their suggestions were solicited.

All of the patients agreed that the area of exercise needed to be explored. Several had braces but were afraid to walk without supervision. Often the personnel were busy and unavailable when the patients were ready to ambulate. All patients felt that each unit should have an exercise pulley for arms and access to parallel bars. However, the lack of supervision made parallel bars too hazardous.

Several patients indicated the need to socialize. One wanted to learn new games which she could play with 1 hand. Two of the men were interested in a reading and discussion group and 1 in a singing group. All expressed a desire for fraternization with patients from other units and suggested that whenever possible the planned activity include both men and women from other chronic disease units. They felt that all patients would be more stimulated and participate more actively in the company of outsiders rather than with the same faces they saw every day.

It was decided to start a "Strike Back at Stroke Club" and approach the patients in a positive way, saying, "We are going to have a 'Strike Back at Stroke Club' " rather than "We are thinking of starting a 'Strike Back at Stroke Club.' "

A questionnaire was sent to each unit physician, lisiting the CVA patients who were not attending P.T. and/or O.T. and asking if there were medical contraindications to their attending a group activity which would include ROM exercises. Two patients were refused permission to attend because of cardiac involvement. Several were questionable candidates because of severe mental deterioration. However, we decided to include them on a trial basis. Most were able to tolerate group activity and follow directions to varying degrees.

A television lounge on 1 of the women's units was chosen because it was convenient to the center elevator and was large and sunny. The O.T. Department had been working with a group of patients and had developed a series of exercises which could be adapted to the "Strike Back at Stroke" group. A dart board and rubber-tipped darts were purchased as was a set of rubber horsehoes. A tiny toy bowling set with plastic balls had to be discontinued when it later proved more frustrating than therapeutic because several patients were unable to master the concept of rolling the balls and insisted on throwing them. This broke the balls and constituted a hazard for the other patients. We wanted a bean-bag toss game which would be different and challenging while suitable for even very handicapped, 1-handed patients. We consulted with the carpenter shop, and the resulting game exceeded our expectations. The round 5/8" baseboard is 3 ft. in diameter with a 7-1/2" wooden bucket (made by the carpenter) in the center, surrounded by 4 large vegetable tins flanked by 4 juice tins. There are 4 3" hand grip holes in the base and rubber tips around the bottom edge to raise it off the floor and allow for ease in lifting it from the floor. The cans were brightly painted and eye-catching. (Fig. 1)

The group began meeting in December, 1965, Monday through Friday, from 10 a.m. till 12 noon. We devised a series of exercises done to music,

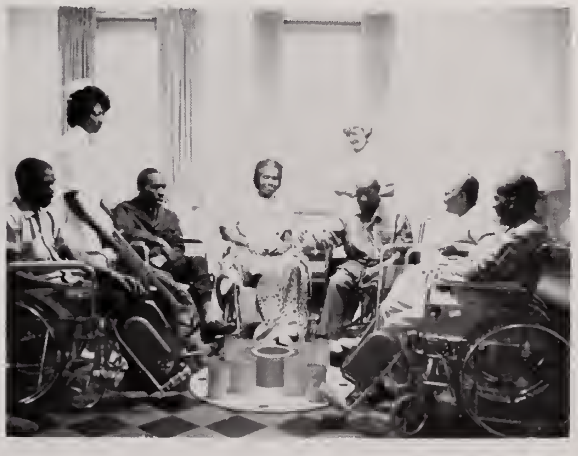


**FIG. 1. Handicapped patients can play this game with one hand.**

starting with the head and extending to the feet, which covered the full range of motion. (Fig. 2) The patients are positioned in a large circle facing the nurse leader who is seated. In this way she can observe each patient's ability to follow directions and perform the exercises. Assistance is given to those who need it. Early in the project it became apparent that 1 nurse could not handle 20 patients by herself. A member of the nursing staff was assigned as a helper to the group on a monthly basis. It was thought that the experience of working with the stroke group would be enriching for the employees and that having the same helpers for a month would provide stability for the patients. Her assistance was needed in standing and walking patients to prevent osteoporosis through use of their long bones. After the patients had followed the leader through the exercises and each had been assisted, if necessary, in full ROM on the affected side and in standing or walking, the patients were regrouped for a game session. Since all groups contained patients who could not participate without supervision, expediency demanded that there should be no more than 2 groups.

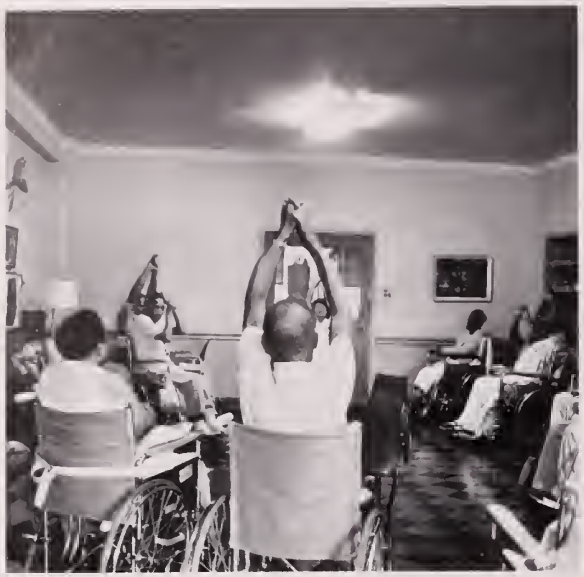


**FIG. 2. This is an exercise to provide passive exercise to the affected shoulder and elbow and to strengthen the unaffected side.**

The 2 games which eventually proved to have both fun and therapeutic value in hand-eye coördination were darts and the bean-bag game. (Fig. 3) Any number can play darts because the board is carried from patient to patient, but no more than 8 wheelchair patients can be grouped around the bean-bag game. Scores are assigned to the various-sized tins, and competition is strong for about half of the participants. Satisfaction for the rest comes from getting the bean-bag into any can. Their triumph lies in conquering their own disability.

For the first few months after the inception of the group it was difficult to determine if this were a meaningful experience for many of the members. Six of the original 20 were aphasic, and only 1 was ambulatory. Most needed to be brought to the group and needed assistance to return to the units. The realization that the group had become cohesive and had begun to accomplish its goal of socialization came when the 1 ambulatory member was discharged from the hospital. He had been escorting many of the men to the lounge each morning and returning them to the proper units and was going to be missed. He asked permission from the leader to have a little farewell ceremony on the morning of his discharge. He had been a lay minister, and his ceremony was religious in nature. He read a passage from the Bible, preached a little sermon exhorting the patients to keep up their faith and hope in getting well and then gave a short prayer. With tears in her eyes, the leader glanced around the room and discovered that there wasn't a dry eye in the place. Every patient in the room, regardless of mental or physical disability, knew exactly what was happening and they had become a viable group. Many patients have come and gone since then, but the group has never lost its sense of belonging. Only 1 of the original members is still a functioning member of the group, but he has progressed from needing assistance in most ADL to a self-sufficient person who dresses himself, transfers without assistance, and is the first group member in the lounge each day.

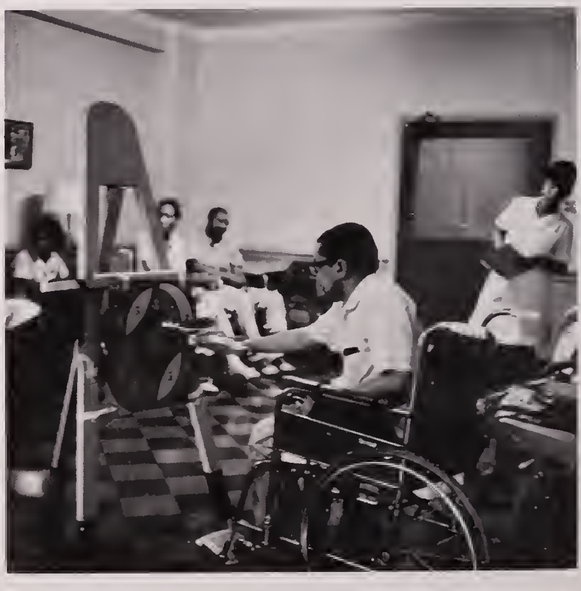


**FIG. 3. This exercise promotes hand-eye coordination.**

Referrals come from many sources. Several of the unit physicians recognize a patient's need for further stimulation and send him to the group. Sometimes Physical Therapy will refer a patient who is being discharged from their service. The greatest number of referrals comes from the nursing service who also observe the needs of the newly admitted patients before they are scheduled for the other services. Often Physical Therapy will schedule a new admission for afternoons so that he can continue to attend group in the morning.

The stimulation to both sexes from sharing the group activity has been apparent in more careful grooming, sustained attendance, and solicitude for the comfort and welfare of other members.

Birthdays are an individual's own 'thing' and are celebrated as near to the actual date as possible. Punch and cookies or cake are served with special low-sugar varieties for the diabetics.

Praise is given for every accomplishment. Most of the patients require physical handling, and those who do not are singled out for special approving remarks. The effort expended in getting to the lounge on time and performing the exercises, as required, deserves recognition and praise. Every effort is made to provide a relaxed and rewarding 2-hour period.

Of the 12 group members who have died during the 5 years of the group's existence, 9 were attending and participating in group activities until the week preceding their demise. How much better to be active till the end instead of sitting around waiting for death to come.

It is impossible to predict the amount of improvement which an individual stroke patient can achieve. Although ours is a nursing maintenance program for patients who have been discharged from Occupational and/or Physical Therapy as having achieved maximum benefit, many have improved to the extent that they have returned to Physical Therapy for further treatment.

## References

1. HOLTZMAN, MILTON: Deconditioning. Practicum: Rehabilitation Nursing, Graduate School of Nursing, New York Medical College, 1962.
2. BIER, RUTH: The Nurse's Management of the Aged Dependent Patient. ANA Regional Clinical Conference, VI (1965), 16-23.

## Supplementary References

DILLER, LEONARD: Hemiplegia, in Garrett, James F. and Levine, Edna S., edited by: Psychological Practices with the Physically Disabled. New York: Columbia University Press, 1962, 125.

A Handbook of Rehabilitative Nursing Techniques in Heimplegia. Kenny Rehabilitation. Sister Elizabeth Kenny Foundation, 1964.

HIRSCHBERG, GERALD G., LEWIS, LEON, AND THOMAS, DOROTHY: Rehabilitation. Philadelphia: J.B. Lippincott Company, 1964.

LARSON, CORRINE W., AND TOOHEY, PATRICIA: Range of Motion Exercise: Key to Joint Mobility. Rehabilitation Publication Number 703. American Rehabilitation Foundation, Minneapolis, Minnesota, 1968.

MILLEN, HELEN M.: The Positive Approach to the Care of The Stroke Patient! Mich. Med., 1970, 69, 887.

Strike Back at Stroke. U.S. Department of Health, Education and Welfare, Public Health Service Publication Number 596. Washington: United States Government Printing Office, 1958.

# From Traditional Institutional Management to the Therapeutic Community Concept: One Hospital's Approach to Change

ROSE G. AMBERG, R.N., B.S., P.H.N., M.S.*

SOCIAL STRUCTURES have a dynamism of their own, and to tamper with and attempt to change the traditional established hierarchy of staff-patient relationship is to invite resistance, uncertainty, and a threat to the security of each individual. But the reward, if there is one, is worth it. Three years ago the Medical Director appointed a committe chairman† and co-chairman‡ and charged them with the responsibility to review hospital programs pertaining to alcoholism. We did not know that our efforts would result in change leading to the Therapeutic Community concept.

## The Problem

The outstanding gains in tuberculosis, the anti-tuberculosis drugs, and the more precise surgical intervention in thoracic surgery led some health authorities in the fifties and sixties to optimistically think in terms of the eradication of tuberculosis.

One group of patients with the dual problem of tuberculosis and alcoholism had become a major reservoir of communicable, active tuberculosis and were unable to continue therapy to non-communicable, inactive tuberculosis status. This problem was experienced throughout the nation, and there was mounting awareness and concern regarding the alcoholic-tuberculous patient.[1, 2]

Glenn Dale Hospital, a 600-bed tuberculosis-chronic disease hospital for the District of Columbia, shared similar unsolved problems of the alcoholic-tuberculous patient, i.e., irregular discharge and inability to coöperate with recommended treatments. Over the years the situation became more acute. The staff were demoralized and frustrated. Bouts of drinking and disruptive behavior by the patients were becoming more frequent, and traffic in alcohol continued to increase. On July 10, 1968 the Medical Director called a special hospital-wide meeting to discuss the continuous and apparently increasing problem presented by alcoholism. Lengthy discussions resulted in a clarification of 2 general problem areas:

a. Those administrative in nature; pertaining to traffic in alcohol by patients, former patients, visitors and staff, and

b. those clinical in nature; pertaining to programs of education and therapy.

This was to be accomplished with no increase or expected increase in budget and/or personnel!!

## Rising to the Challenge

The chairman and co-chairman discussed at length: a) Formation of the committee, b) selection of members, and c) design for action.

There were several underlying factors that were basic. Since this is a long-term hospital, treatment and maintenance of the patient are inseparable, all hospital employees are, or can be a factor in the patient's regaining his health.

It was hoped that the social structure could be changed so as to enhance communication between staff and patients and between staff members, diminish status so that something of a peer group would emerge, and utilize optimally the potentials of all.

With this as a basic philosophy and the assumption that the problem of alcoholism was a hospital-wide problem, representatives from each unit§ within the hospital were selected. The overall committee consisted of 22 members, broken down into 5 subcommittees to study the problem of alcoholism and alcohol traffic, and to make recommendations.

There was no special research team, nor was any employee detailed away from regular duties. We were not concerned with correlation coefficients, chi squares, or probability values. We had no university to come in and do a study, and there was no grant money. We had to use ourselves and cross-pollinate and fertilize each others' minds and imaginations in an attempt to bring forth a flowering of new thoughts, attitudes, and behavior patterns.

---

* Associate Director of Nursing Education, Glenn Dale Hospital, Glenn Dale, Maryland 20769.

† Wm. Washington Jr, M.D., former Chief, Treatment Division was original chairman. James Wills, M.D. Chief, Treatment Division is current chairman.

‡ Mrs. Amberg, author of this paper, has been co-chairman continuously from inception of this project to the present.

§ Nursing, Medicine, Social Service, Occupational Therapy, Physical Therapy, Security, Housekeeping, Laundry, Plant Engineering, X-Ray, Laboratory, Dietary, Administration, and the Clinical Social Worker (Alcoholism).

For the next 6 months the committee members read extensively and met and shared their progress and findings. There was enthusiastic, open, hard discussion; grappling and wrestling with questions such as Should we build high fences and more security?; therapeutic methods vs punitive methods?; why do patients refer to their hospitalization as being in prison?; who is an alcoholic?; are our policies and regulations too restrictive?; do we really meet the patient's needs?; what are the patient's needs and what are the employees' needs?; how can we utilize the patient's energies constructively rather than the crippling self-absorption or aggressive outbursts we were seeing?; was there enough socialization and recreation?; are we talking about alcoholism in particular or mental health in general?

Committee members stated that they themselves had developed a more positive and hopeful attitude toward alcoholism. The climate of committee meetings also changed noticeably from fairly restrictive to a freer, more spontaneous and friendly expression regardless of the position of the individual in the staff hierachy. A peer relationship was emerging.

Recommendations were crystallized and categorized into the 3 major areas of patient, staff, and others. Some could be initiated immediately, some were interim goals, and others were long-range.

For staff it was becoming quite clear that it is not enough to look at the behavior of patients alone. The behavior and communication patterns of the staff must be studied because the genesis of the behavior of patients may be found in the patient-staff relationship. Dr. Wilmer points out that our patients tend to behave as we do: "The more our own anxiety and aggression are under control, the more their's are likely to be . . . . If we (secretly) do not trust our patients, if we (secretly) expect bad behavior, self-discharge and the like, if we hold that bad behavior calls for stringent punitive regimentation, we shall in all probability be unsuccessful in fostering self-control in patients."[3]

A high priority for staff education was indicated:

1. Hospital to send employees to programs or workshops on alcoholism
2. Utilize community resources for field trips
3. Continuing hospital-wide inservice programs on alcoholism
4. A permanent hospital-wide committee on alcoholism to be established
5. Long-range goal to provide a comprehensive alcoholic unit for patients and for staff consultation.

The proposed plan for patients included:

1. Utilize patients as alcoholic counselors and as group leaders
2. Initiate a form of self-government
3. Increase recreational facilities for patient socialization
4. Medical staff to review current activity status of patients and update as indicated
5. All alcoholic patients encouraged to attend A.A. meetings.

Other measures recommended:

1. Periodic search of wards
2. Stronger action for employees who traffic in alcohol
3. Increase the present guard service.

## Action Phase

Out of the recommendations evolved the Executive Committee on Alcoholism, a permanent committee as of March, 1969. Three permanent subcommittees were established: in-service education, treatment coördinating, and therapeutic community.

Later the Ad Hoc Committee to study the involvement of non-tuberculous patients was made a permanent subcommittee.

As a result of committee activities, a psychologist from the D. C. Health Department was assigned to the project on a parttime basis as a resource person. A team from Area C Mental Health Center was also available parttime to strengthen the staff's resources.

Throughout the year there were many activities and programs on alcoholism. The committee used available resources as speakers, consultants, field trips. Visits were made to Crownsville State Hospital, St. Elizabeths, Area C Mental Health Center, Detox Center, and Occoquan Alcoholic Rehabilitation Center. A workshop on Psychological and Medical Aspects of Alcoholism was attended by 166 employees. Two employees attended the Summer School on Alcohol Studies at Rutgers University; 40 employees attended Howard University's course, "Community Studies on Alcoholism"; the Director of the Alcoholism Center, Baltimore City Health Department, spoke to committee members describing his programs and giving valuable guidance for our program. A visiting British physician who is an authority in the field spoke to the medical staff. The psychologist, social worker and alcoholic counselor from the alcoholic unit at Crownsville State Hospital visited with committee members and patients to help us critically review our activities. A display on alcoholism was set up in the lobbies of both hospital buildings. The orientation for new employees was expanded to include information on alcoholism and associated problems. Because nursing is so directly and continuously involved in patient care, field trips as well as reading and discussion in this area were expanded.

Films on alcoholism were shown to small groups of employees lead by group leaders from hospital staff. Well over 100 employees from all areas attended. The patient educator showed these films to patients and visitors in discussion groups. In addition, pool tables, shuffle boards, and more space for patient recreation and socialization were provided.

We reached out whenever we could, hoping that a multi-faceted thrust and attack on the problem would stimulate, recharge and regroup everyone's thinking.

The Therapeutic Community subcommittee, after months of intensive work, recommended the creation of a model Therapeutic Community. We proceeded cautiously. We realized that the task would be difficult and staff resistance might be hard to overcome. Maxwell Jones[4] comments:

> "In a developing community, staff can get used to the idea of change, provided change is seen to be beneficial to patient care and treatment and the well-being of the staff. Resistance to change is an inherent quality in us all. It can be modified most effectively by the repeated demonstration that change brings about an overall improvement.
>
> Change has a different significance for different individuals; it may be resisted most by people who are called upon to make the maximum contribution and, by implication, the maximum change."

The committee agreed that the nursing staff and physician were most directly involved and would have to make the "maximum" change. Therefore, a 50-bed tuberculosis adult male unit was selected with a supervisory nurse and physician who had completed the course at Howard University and were willing to help in this endeavor.

## The Model Unit

"Therapeutic Community," "Milieu Therapy," "Milieu-Conscious Management" are by now familiar terms in the literature. The concept is usually credited to the British psychiatrist Maxwell Jones as an environment and self-help technique in the treatment for mental illness. In a review of literature we found a study done in a California V.A. Hospital with the tuberculous alcoholic patient utilizing a therapeutic community setting. Their experience helped us to limit expectations as well as to give guidelines to avoid certain pitfalls. The article indicated that patients with many arrests and a low maturity-test evaluation did not work out well in the program. However, good risks in the therapeutic community received proportionately more regular discharges than good risks in the control group.[5]

As indicated earlier, patients take their cue for behavior from the staff. We did not go about selecting patients for a demonstration unit but rather selected a unit with staff willing to work with this concept. Our definition was simply stated as a setting in which there is optimal participation by patients and staff whose purposes are to create and maintain a maximum therapeutic setting so that all patients receive total treatment benefits, and to make possible a program with optimum communication, coöperation, and coördination which will be the wheels for delivering necessary therapeutic service.

Our objectives were:

a. To treat and rehabilitate the patients
  1. by allowing the patients to be active participants rather than passive subjects in the treatment process
  2. by giving a chance to grow and develop potentials to the fullest in a living-learning therapeutic situation
  3. by providing an opportunity to regain destroyed confidence, re-discover shattered dreams, find and maintain hope, and reconstruct a healthful and productive life.

b. To provide a setting so that the staff members may grow to their full potential in carrying out the functions and responsibilities inherent of their positions.

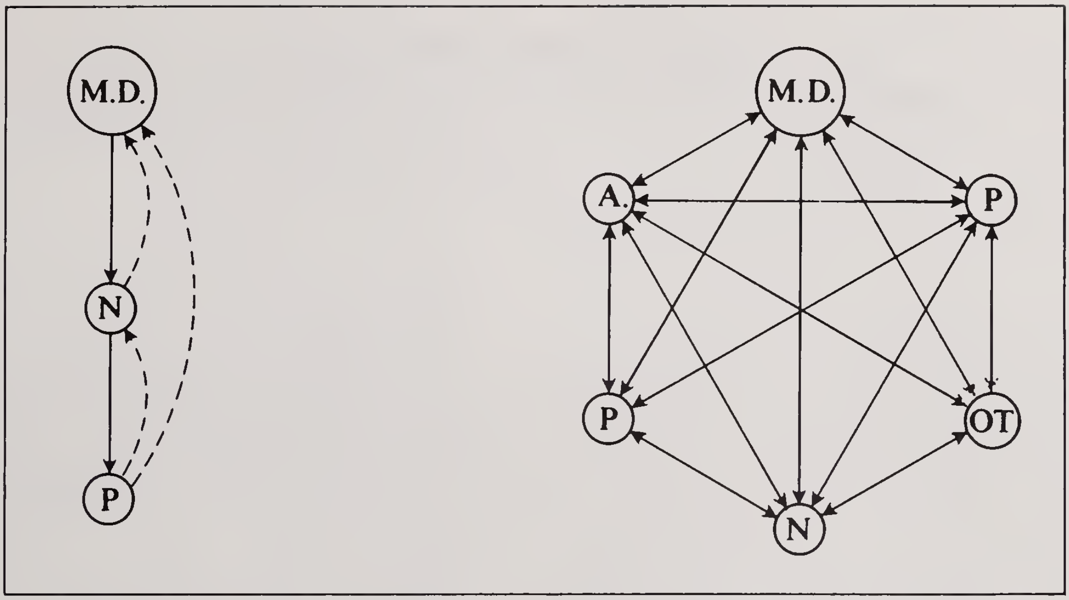
Again the grappling with questions. "How do we begin?", "Who will be the leader–the physician?, the nurse?, the patient?, others?", "How will we prepare staff and patients?", "How far will top administration support us?"

Leadership and support from the Medical Director and his Executive Committee was a tremendous motivating factor in helping the project to get started. A resource team composed of a physican, nurse, psychologist, psychiatric social worker, and recreation specialist held several orientation meetings separately with staff and patients from the selected unit, and then joint meetings weekly with patients and staff.

Five patients and 5 staff members were selected to draft a constitution and submit it for administrative approval. In July, 1970 the Therapeutic Community officially began.

## Problems and Progress

Reactions varied. Both patients and staff were apprehensive. Negative reactions among the staff included such statements as, "Patients will be running the hospital," "The only thing workable is more strict



Straight-line, top-to-bottom pattern of communication at left typifies authoritarian structure of many institutions. Pattern at right shows what happens when patients and staff members feel free to express themselves.

enforcement of the regulations and stronger policies." Patients remarked that this was a "spy group" and "an attempt to further restrict activities."

Counter reactions from others were that "this concept was the only solution to the problem." I quote the progress report of the chairman of the Therapeutic Community Subcommittee: "During the embryonic stage there were periods in which a climate of chaos prevailed. One left these sessions with a feeling of confusion, depression, frustration, and sometimes hostility". . . ."As the sessions grew in number and as the group became closer, many of the previously stated feelings began to change. A climate of mutual understanding, trust, and coöperation began to develop. The staff began to see patients differently and became more sensitive to non-medical needs and vice versa. The meetings became the medium through which ideas were exchanged, feelings communicated, and decisions arrived at through the group process, with all having an equal voice. Hostilities could be vented in an accepted fashion. I observed this with both patients and staff."

A great deal of interest about the Therapeutic Community was generated throughout the hospital by employees and patients. It created some jealousy among patients on other units and instilled a sense of pride among patients exposed to it on the model unit.

Six months after the initial orientation, an evaluation session was held with feedback from patients, staff, and committee members. A major problem was in communication with employees on evening and night tours of duty. The patient who was chairman of the Therapeutic Community summed up patients' overall response: "Therapeutic Community is almost like giving democracy to a country that doesn't know about it. The Therapeutic Community is now beginning to gel. The patients are beginning to try to prove that they can assume responsibility. They know they have much to accomplish and feel that their doubts have been disproved because administration and staff have allowed many things to happen which the patients never believed would be allowed."

The unit physician commented: "The atmosphere of the ward is warmer, there is better communication between patients and personnel, and there are fewer disruptive incidents."

The supervisory nurse had an overwhelmingly favorable response: "It gives the patient the feeling of belonging, or a sense of security in his participation in ventilating with other than patients or the immediate staff. We feel there is better communication in all areas of other services. There is improvement in the departmental staff of being aware of patients' needs and endeavors to reach them. Patients are expressing their desires and needs to us more in a non-hostile manner. There is a general improvement in cleanliness of the patients and their surroundings." She concluded by recommending the Therapeutic Community be extended to other units.

There were many other favorable comments received both verbally and written that are beyond the scope of this paper. The Executive Planning Committee recommended that the Therapeutic Community be extended to the other tuberculosis units and that when these were established, to proceed to the non-tuberculosis chronic disease units.

Indicative of the change in attitude was the deletion of "alcoholism" from the title of the Executive Committee and the substitution of "Therapeutic Community".

As of May 1971 the 3 adult tuberculosis wards (150 beds) are involved in a Therapeutic Community setting. The setting has been adjuged to be a viable and proven asset to the mutual benefit of patients and hospital administration. Staff and patients are in a living-learning situation, attempting to work through the day-to-day living operation with decision-making by consensus. It is not easy, especially for patients and employees new to this concept. Ultimately, the goal is to realize the Therapeutic Community concept hospital wide.

In summary, this is a condensed version of 3 years' activities in a Tuberculosis-Chronic Disease Hospital to examine problems initially associated with the disruptive behavior of the tuberculous-alcoholic patient. The overt problems of disruptive behavior led to a program of action which had an authoritarian character to that of a milieu-conscious management with open communication between patients and staff decision-making by consensus in a democratic setting (see diagram).

If the Therapeutic Milieu Program is to be successful, everyone must have an active role with an opportunity for decision-making on all levels of the hospital community.

## References

1. WEISS, MOE: Opening Remarks to the General Session. Paper read before the Workshop on the Alcoholic Tuberculosis Patient and the Community, Glenn Dale Hospital, Glenn Dale, Maryland, May 4, 1959.
2. JACKSON, JOAN K.: The Problem of Alcoholic Tuberculosis Patients, in SPARER, PHINEAS J., edited by: Personality, Stress and Tuberculosis. New York: International Universities Press, 1956.
3. WILMER, HARRY A.: Pity, Sympathy and Empathy, in SPARER, PHINEAS J., edited by: Personality, Stress and Tuberculosis. New York: International Universities Press, 1956, p. 248.
4. JONES, MAXWELL: Beyond the Therapeutic Community. New Haven: Yale University Press, 1968, p. 27.
5. WILBUR, BARBARA J., SALKIN, DAVID AND BIRNBAUM, HAROLD: The Response of Tuberculosis Alcoholics to a Therapeutic Community. Quart. J. Stud. Alcohol, 1966, 27, 620.
6. KRAMER, CHARLES H.: What's Needed to Get Patients Outside Their Dependent Selves: Effective Communication. Mod. Nurs. Home, 1969, 23, 3, 72.

# Gastrobronchial Fistula: Report of a Case and Review of the Literature*

BELA GONDOS, M.D.†, HALAPPA G. HAKKAL, M.D.‡, AND WILLIAM P. WALKER, M.D.§

PERFORATION OF THE DIAPHRAGM and consequent communication of the abdominal cavity (or a part of it) with the thorax, as a complication of a subdiaphragmatic abscess, was not uncommon before the advent of the antibiotics. One of the observers writing on this subject estimated the incidence as 10-12%.[1] In another report on 890 collected cases of subphrenic abscesses, diaphragmatic perforation was found as commonly as 19.6%.[2]

Indeed, subdiaphragmatic abscess was the most common cause of perforation of the diaphragm during the antibiotic era.[3] Nowadays this serious complication is rarely reported.[4-6] It occurs in prolonged and neglected cases of subdiaphragmatic abscess in which surgical drainage is markedly delayed. Ochsner and DeBakey[7] state that the incidence of intrathoracic complications is directly commensurable with the length of time elapsing between the development of subphrenic infection and the institution of therapy. Suppurating processes in the thorax rarely if ever perforate into the abdomen. The reason for this experience is probably the fact that the lymphatic flow in the diaphragm is cephalad in direction. If the perforation penetrates into the pleural cavity, empyma follows with possible secondary perforation into the lung.[8,9] In the latter event an indirect subdiaphragmatic-bronchial fistula comes into existence. More commonly, perforation is preceded by adhesion of the pleural sheaths resulting in a direct bronchial fistula communicating with the subdiaphragmatic space. Left subdiaphragmatic abscess tends to perforate into the adjacent stomach as well, producing a gastro-bronchial fistula.[5-9] In 1 reported case the fistula communicated not only with the bronchi and the stomach but also with the colon.[10] The use of antibiotics has significantly reduced the incidence of subdiaphragmatic abscess and greatly modified its course.[11-13] Perforation into the neighboring structures is very rare today.

Gastrobronchial fistula may also occur as a complication of a penetrating trauma[14] or of an incarcerated gastric hernia of the stomach.[15,16] A case of pyopneumothorax as the result of perforation through the diaphragm by a gastrostomy tube has also been reported. The tube was inserted too deeply in a patient who had a permanent gastrostomy.[17]

Penetration and perforation of a gastric ulcer through the diaphragm into the thorax is a very rare development. The purpose of the present communication is to report such a case with a good documentation of this complication by X-Ray examination, surgical observation, and post-mortem study.

## Report of Case

The patient was a 63-year-old negro woman, a resident of a nursing home for the past 5 years because of Erb's spastic paralysis. This was her 3rd admission into the District of Columbia General Hospital. On the day of admission (8/6/69) she felt the sudden onset of a sharp pain in the lower half of the left side of the chest which radiated into the left shoulder and arm. There was accompanying vomiting of dark brown material, according to an informant from the nursing home. The patient, however, claimed that she coughed up rather than vomited the coffee-ground material. She denied fever, chills or any abdominal pain, but admitted anorexia, weight loss, and increasing productive cough of 3 months' duration.

Past history included a pelvic laparotomy in 1945. The patient stated that there was "a tumor in my stomach." No further information was available. Her first admission to the D. C. General Hospital was in December 1968 for vomiting and constipation for 3 days. A diagnosis of small intestinal obstruction was made, and exploratory laparotomy revealed volvulus of the ileum and adhesions of small intestinal loops to a surgical scar in the anterior abdominal wall. The other abdominal organs were found to be normal. The obstruction was relieved by separation of the adhesions. Two months later (2/16/69) the patient was seen again with manifestations of small-intestinal obstruction which subsided following nasogastric suction.

---

* From the Radiology Division, District of Columbia General Hospital, 19th and C Streets, S.E., Washington, D. C. 20003.

† Director of Residency Training Program and Research, Radiology Division; Associate Clinical Professor, Georgetown University School of Medicine; Assistant Clinical Professor, George Washington University School of Medicine and Howard University College of Medicine.

‡ Chief Resident in Radiology.

§ Resident in Radiology.

The patient was found to be alert, in mild respiratory distress, and slightly dehydrated. There was no cyanosis. The pulse rate was 86/min., B.P. 90/60mm Hg, Resp. 22/min., and temp. 100.2°F. Coarse rhonchi and rales over the left lower lung field and a grade II systolic murmur over the cardiac apex and lower left sternal border were heard. The abdomen was flat, soft, and non-tender, and the bowel sounds were hypoactive. There was a surgical scar in the anterior abdominal wall along the left paramedian region and decubitus ulcers over the buttocks and sacrum. Neurological examination revealed spastic paraplegia (Erb's paralysis), diagnosed at another hospital in 1963.

A frontal roentgenogram of the chest revealed an infiltration in the left lower lung field. No cavity within the infiltration could be identified. There was no pleural effusion, and the left hemidiaphragm was elevated. Abdominal films showed no evidence of intestinal obstruction or pneumoperitoneum. A chest roentgenogram taken 15 months prior to admission had revealed no evidence of any disease. An emergency upper X-ray gastrointestinal examination with barium meal was performed 6 hours after admission and a fistula communicating between the fundus of the stomach and a bronchus of the left lower lobe was discovered. There was no extravasation into the peritoneal or pleural cavity. The gastroesophageal junction was seen below the left hemidiaphragm. The width of the perforation measured about 2.5 cm. (Figs. 1A and 1B).

Exploratory laparotomy was performed 7½ hours after admission. It revealed a perforation involving the fundus of the stomach, in a distance of 3-4 cm from the gastroesophageal junction. This perforation had an approximate diameter of 2 cm and seemed to penetrate into the left lung through the diaphragm. There was adhesions around the perforation but no exudate in the peritoneal cavity. At this stage a left thoracotomy was started which revealed the perforation to be penetrated into the left lower lobe. It lead into an abscess cavity which communicated with a segmental bronchus. There was considerable inflammation and necrosis involving the adjacent lung parenchyma. Because of considerable parenchymal destruction a left lower lobectomy was performed. During the dissection a large pulmonary vein was inadvertently severed and a major hemorrhage ensued followed by cardiac arrest and death of the patient 10 hours after admission.

Gross anatomical and microscopic study of the surgically removed left lower lobe revealed an extensive area of suppurative necrosis, focal

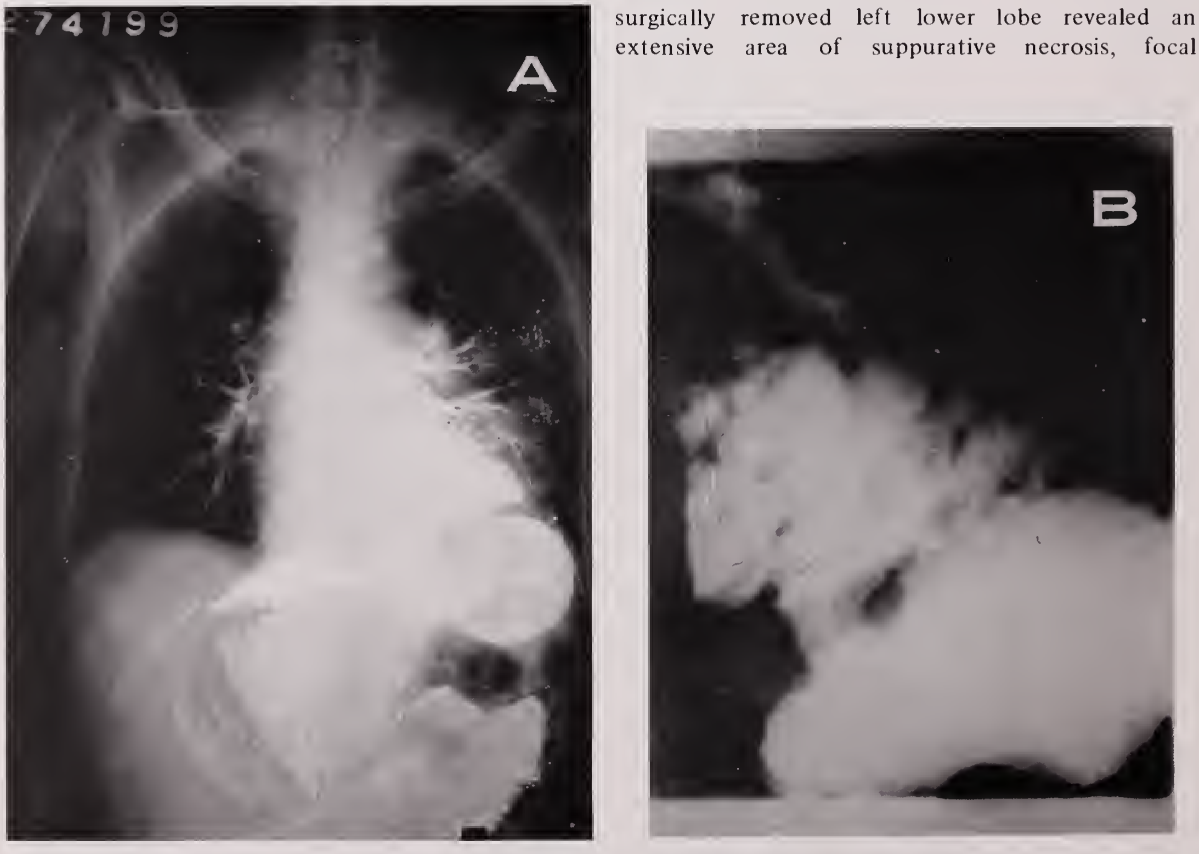


FIG. 1. a) Barium study of the upper gastrointestinal tract showing barium in stomach and proximal loops of jejunum. Barium also filled a cavity in left lower lobe and a large number of bronchi. b) Spot film, showing fundus of stomach, barium-filled cavity of left lower lobe and wide communication between the 2 structures. Proximally to the pulmonary cavity the communication with the lower lobe bronchi is visualized.

parenchymal hemorrhages, and scattered bacterial colonies. The parenchyma adjacent to the necrotic area surrounding the fistula showed marked congestion, and the alveoli were filled with red fluid, containing a moderate number of pigment-laden macrophages. Numerous bronchi had necrotic walls, and their lumen were filled with purulent material admixed with brownish granular substance. This substance was extravasated barium sulfate used in the gastrointestinal examination. The diaphragmatic pleural surface of the left lower lobe around the fistula was covered by fibrino-purulent exsudate. The fistulous tract on the diaphragmatic surface of the left lower lobe corresponds with the 2.5 x 2 cm. defect of the adjacent part of the diaphragm.

Postmortem examination showed the rest of the lung parenchyma, i.e., the left upper lobe and right lung to have areas of atelectasis, passive congestion, and edema. The defect in the fundus of the stomach produced by the perforation was surrounded by a hemorrhagic and edematous margin. The gastric mucosa at the margin was ulcerated, and the base of the ulcer was edematous fibrous tissue with a few scattered lymphocytes (Fig. 2). The serosal surface of the fundus of the stomach was adherent to the adjacent diaphragm by hemorrhagic edematous fibrous tissue. This adhesion apparently prevented the gastric contents from entering the abdominal cavity during perforation of the gastric ulcer and permitted the extension toward the thoracic cavity through the diaphragm.

In the central nervous system perivascular lymphocytic cuffing and scattered minimal lymphocytic infiltrates in the leptomeninges were found. There was neuronal degeneration of the cerebral cortex and the grey column of the spinal cord. In view of the clinical manifestations of Erb's paralysis the histological findings may represent menigo-vascular syphilis.

The final pathogical diagnosis was: Peptic ulcer of the fundus of the stomach, perforating through the diaphragm into the left lower lobe resulting in a gastrobronchial fistula—status after left lower lobectomy. Cause of death: Cardiac arrest secondary to hemorrhage and shock during left lower lobectomy.

## Comment

The patient had no subdiaphragmatic abscess, no gastric hernia, and no perforating injury. The peptic ulcer in the fundus of the stomach, identified on autopsy, was obviously responsible for the perforation and for the gastro-bronchial fistula.

## Discussion

Only a few cases of fistulous communication between the stomach and the thoracic cavity as a complication of a gastric ulcer have been reported in the literature. One early case was reported by Heubner in 1871.[8] The patient was a 27-year-old woman in whom perforation of the stomach occurred at first into the pleural cavity and subsequently into the lung resulting in an indirect gastro-bronchial fistula. The diagnosis of a communication between the lung and the gastrointestinal tract was made during life by clinical observation and physical examination alone. Autopsy revealed a perforating gastric ulcer located on the anterior wall of the stomach "closer to the fundus than to the pyloric portion." A case of pyopneumothorax from perforation of a gastric ulcer was reported by Ranson in 1899.[18] This was a 20-year-old woman who suddenly developed pain in the left axilla 6 weeks prior to the first medical observation. The pain was stabbing in character and radiated into the left upper abdomen. Subsequent cough produced sputum of unpleasant taste and odor. On admission tympanic note and amphoric breathing were observed over the greater part of the left hemithorax, and metallic tinkling was heard over the same area. Previous history included abdominal pain of 2 years duration occurring after food intake,

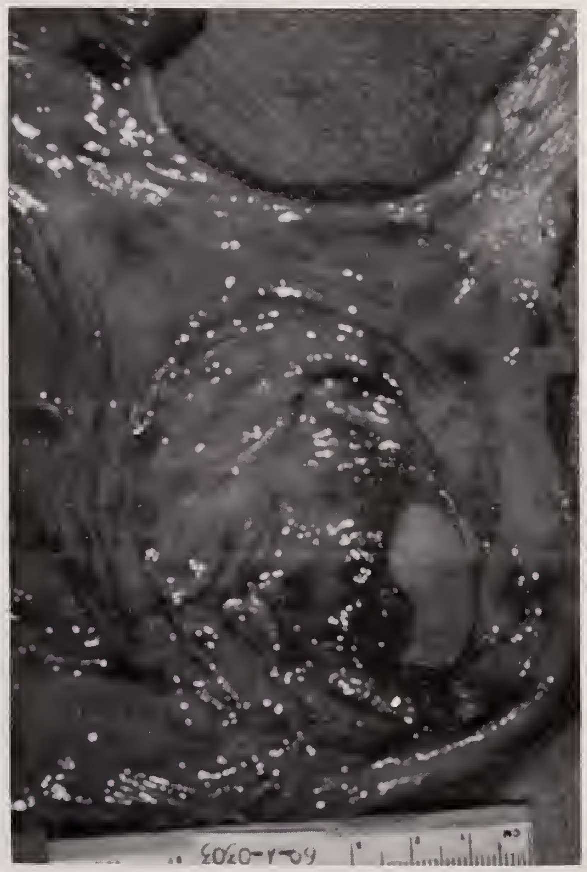


**FIG. 2.** Gross specimen of stomach at autopsy, showing oval-shaped defect of perforated ulcer in fundus.

associated with occasional vomiting. In 1 instance the patient vomited dark blood. A diagnosis of pneumothorax following perforation of a gastric ulcer through the diaphragm was made. Hospitalization was refused at first by the patient, but she was admitted a week later. Pleural tap and subsequent thoracotomy produced fetid pus. Four days following admission the patient coughed up mucus, pus, gastric fluid, and bile. The coughing up of gastric content could be prevented by propping the patient in the up-right position, so that the hole in the stomach should be above the level of the fluid therein. She died 15 days after admission. Autopsy revealed an indurated ulcer on the posterior wall near the cardiac end of the stomach which was firmly adherent to the diaphragm. In the middle of the crater a small perforation was present. The inner surface of the spleen and the upper surface of the liver were covered by thick green pus, and this was extending to the right half of the diaphragm. "It was clear that the infection which was spread from the ulcer to the left pleural cavity was practically cured by the treatment adopted, but the subphrenic suppuration had remained and had caused death." Hudson et al[20] in 1945 reported a case of gastro-pleural fistula. This patient was a 60-year-old man whose physical examination and roentgenography of the chest revealed the presence of pneumothorax. Aspiration of the pleural cavity produced gas and brownish fluid, the latter containing free hydrocloric acid, food particles, and occult blood. Postmortem examination revealed a perforating ulcer on the posterior aspect of the stomach at the cardiac end. The ulcer eroded the wall of the stomach and of the adjacent part of the esophagus. The perforation was obviously followed by the spilling of the stomach contents into the pleural cavity. A spectacular case of perforation of a gastric ulcer through the diaphragm into the left ventricle of the heart was recently described by Ritz and Fisher (1968).[20] The perforation resulted in an extremely massive bleeding and rapid death of the patient. The peptic ulcer was identified on pathological examination. Pendl[21] (1958) who reported a similar case reviewed the literature up to 1880, during which time 4 other cases of complete perforation of a gastric ulcer into the left chamber of the heart were reported. In 2 additional cases only penetration of the gastric ulcer into the cardiac wall occurred but without perforation.

A particular feature of the case presented in this paper is the location of the ulcer in the summit of the fundus, in an area where ulcer without perforation has not been observed. Templeton[22] stated that he had never seen an ulcer in the fundus behind the esophagogastric junction. Ulcer in this location is unknown in roentgenological literature. Ruding and Hirdes[23] in a study of the location of peptic ulcers in 80 resected surgical specimens found no ulcer in the fundus of the stomach. They thought that the mucosa of the fundus is apparently resistent to hydrochloric acid, "while the antral mucosa which is involved by ulcer in the highest incidence" (46:80) is not resistant and has the highest exposure to hydrochloric acid. On the other hand, in 9171 consecutive autopsies Portis and Jaffe[24] recorded 196 gastric ulcers, and 6.1% occurred in the fundus.

Anatomical textbooks define the fundus as an area which is separated from the remainder of the stomach by a plane placed horizontally through the cardiac orifice. Its size and its relationship to other structures is obviously subject to change depending on habitus, body position, state of distention, nutritional status, and other factors. It is evident that the fundus is not an exactly defined part of the stomach. It is also obvious, that a portion of the stomach which is in contact with the summit of the diaphragm is a part of the fundus. The pathological observations and the quoted cases of perforated ulcers in the fundus seem to indicate that ulcers in the fundus do occur. It may be assumed that in the fundus, which is in many respects different from the rest of the stomach, peptic ulcer escapes roentgenological recognition. The apparent fact that perforation is the only manifestation by which it is discovered may indicate that ulcer in the fundus is either more common than the quoted cases may suggest or there is more tendency for perforation in this area of the stomach than in ulcers in other locations.

## Acknowledgements

Sophie L. Perry, M.D., Chief Medical Officer of Pathology and Laboratories was helpful in the evaluation of gross specimen and slides.

## References

1. LOCKWOOD, A. L.: Surg. Gynec. Obstet., 1921, 53, 502.
2. GUY, C. C. AND OLECK, H. T.: Arch. Surg., 1947, 55, 316.
3. PIQUAND, S.: quoted by OCHSNER, A. AND DEBAKEY, M.: Int. Abstr. Surg., 1938, 66, 426.
4. ALBERTSON, H. A.: J. Thorac. Surg., 1953, 25, 505.
5. HATHIRAT, S. AND RENZETTI, A. D., Jr.: Amer. Rev. Resp. Dis., 1967, 99, 581.
6. MILNE, R. M. AND THOMSON, J. W. W.: Brit. J. Surg., 1970, 51, 632.
7. OCHSNER, A. AND DEBAKEY, M.: Int. Abstr. Surg., 1938, 66, 426.
8. HEUBNER, O.: Arch. Heilkunde, 1971, 2, 193.
9. LORTAT-JACOB, J. L. AND ROBERT, H.: J. Chir., 1956, 72, 623.

10. MASON, L. B.: Amer. Surg., 1965, 31, 278.
11. OCHSNER, A. AND GRAVES, A. M.: Ann. Surg., 1933, 98, 961.
12. ROSENBERG, M.: Lancet, 1968, 2, 379.
13. WETTERSFORS, J.: Acta Chir. Scand., 1959, 118, 409.
14. SEIFARTH, K. A.: Fortschr. Rontgenstr., 1959, 91, 408.
15. SOMMER, G. N. J. AND MILLS, W. O.: J. Thorac. Surg., 1947, 16, 265.
16. LIAVAG, K.: Acta Chir. Scand., 1948, 96, 245.
17. GIBBON, J. H., SABISTON, D. C. AND SPENCER, F. C.: Surgery of the chest. Philadelphia: W. B. Saunders, 1968.
18. RANSON, W. B.: Lancet, 1899, 1285.
19. HUDSON, P. B., GUY, L. C. AND NEWMAN, H. E.: Arch. Surg., 1945, 50, 301.
20. RITZ, A. AND FISCHER, R.: Schweiz. Med. Wschr., 1968, 96, 327.
21. PENDL, O.: Wien. Klin. Wschr.: 1958, 70, 301.
22. TEMPLETON, F. E.: X-ray examination of the stomach. Chicago: The University of Chicago Press, 1964.
23. RUDING, R. AND HIRDES, W.: Surgery, 1963, 53, 743.
24. PORTIC, S. A. AND JAFFE, R. H.: J. A. M. A., 1938, 110, 6.

# Achlorhydria in Alcoholics

LEO B. JANIS, M.D.*

CHRONIC DRINKERS SUFFER from chronic gastritis. Logically one might hypothesize that after a 5- to 10-year period of heavy drinking alcoholics should demonstrate varying degrees of gastric mucosal atrophy.[1] A hypothesis of considerable therapeutic significance for, as is well known, atrophy of gastric glandular cells produces a chronic malabsorption syndrome with rather devastating results.[2]

Utilizing the azuresin diagnostic test (Squibb's Diagnex Blue) 92 alcoholic patients were tested for gastric hypo-acidity.

### Results

| Age group | Number tested | Positive results | Percentage abnormal |
|---|---|---|---|
| 20-30 | 9 | 4 | 45 |
| 31-40 | 29 | 11 | 40 |
| 41-50 | 34 | 16 | 50 |
| 51-60 | 20 | 12 | 60 |
| Total | 92 | 43 | 49 |

Almost 50% of chronic drinkers demonstrated a lower than normal production of gastric hydrochloric acid.

As is well known, when the production of hydrochloric acid in the stomach is less than normal a malabsorption of essential nutrients occurs. And, as a consequence, optimal mental and physical well-being can never be achieved unless specific therapeutic measures are maintained for the remainder of the patients' life.[3]

This subacidity syndrome is clearly observable in cases of partial or total gastrectomy. Surgical removal of 50% to 80% of the stomach necessarily results in a 50% to 80% decrease in gastric glandular secretions.[4, 5] Inevitably, within a period of 2 to 10 years the cardinal signs and symptoms of defective absorption appear:[6]

1. Slowly progressive macrocytic anemia and leukopenia.
2. Megaloblastic changes in the bone marrow.
3. Frequent association of oral, gastrointestional, and neurologic damage.
4. Hematologic response to vitamin $B_{12}$ and/or folic acid.

Heretofore, surgical gastrectomy and pernicious anemia have been the 2 most common entities characterized by achlorhydria. Results obtained with Diagnex lead one to conclude that achlorhydria is present in approximately 49% of chronic drinkers and that the medical management of alcoholism must take into consideration the presence or absence of a 'chemical gastrectomy'.

### References

1. CHEY, W. Y., et al: Gastric secretion in patients with chronic pancreatitis and in chronic alcoholics. Arch. Intern. Med., 1968, 122, 399.
2. VICTOR, M.: Treatment of the neurologic complications of alcoholism. Mod. Treatm., 1965, 2, 491.
3. SLANGER, A.: Management of gastric achlorhydria and hypochlorhydria. Geriatrics, 1966, 21, 193.
4. FRENCH, A. B., COOK, H. B., AND POLLAR, H. M.: Nutritional problems after gastrointestional surgery. Med. Clin. N. Amer., 1969, 53, 1389.
5. FRENCH, A. B.: Treatment of postgastrectomy malabsorption. Mod. Treatm., 1965, 2, 335.
6. BEESON, P. B. AND MCDERMOTT, W., editors: Cecil-Loeb Textbook of Medicine, 12th edition. Philadelphia: W. B. Saunders Company, 1967.

---

* Government of the District of Columbia, Department of Human Resources, Rehabilitation Center for Alcoholics, Occoquan, Virginia 22125.

# Glenn Dale Hospital: A Rehabilitation Center

TUMKUR MADHU, M.D.* AND MOE WEISS, M.D.†

GLENN DALE HOSPITAL is the major facility of the D. C. Department of Human Resources, Hospitals and Medical Care Administration providing medical rehabilitation for long-term patients with physical disabilities and chronic diseases. This hospital, located in Prince George's County, Maryland, was opened in 1934 for treatment of tuberculosis patients, and began accepting chronic disease patients in January, 1960. With improved preventive medicine and advent of more effective anti-tubercular chemotherapy, the steady trend has been for fewer admissions of tuberculosis patients, with shorter periods of hospitalization, thus releasing more beds for chronic disease patients. Until 1960 the Physical Medicine Service consisted of Occupational Therapy only. To meet the growing demands, the Physical Medicine and Rehabilitation Service has been expanding rapidly in manpower, equipment and space: Physical Therapy (1961), Speech Pathology (1964), Recreation (1967), Corrective Therapy (1969), Pediatric Physical Therapy (Fig. 1) (1970), a training program for the deaf and the blind (1971), and a Mental Health Division (1971) were added.

FIG. 1. Children in pediatric physical therapy.

In a medical institution, various services, with diverse functions, all combine for a central purpose; to deliver comprehensive care, treatment and rehabilitation to patients. One of the goals of Glenn Dale Hospital is to expand this institution as a model regional rehabilitation center.

At this hospital the main product of rehabilitation service is to achieve maximum degree of self-help ability and independence in patients. The Service sets its goals to coincide with the goals of the patient. The Service has an open, self-critical, nondefensive attitude. Without disrupting the clinical care, the Service is also active in research and has teaching affiliations with local medical and paramedical schools. The contributions to improved techniques achieved in medical rehabilitation at Glenn Dale Hospital have been disseminated through presentation of scientific papers in International Congress of Physical Medicine, 1968, A.M.A., 1968, American Congress of Medical Rehabilitation, 1967, and Association of Medical Rehabilitation Directors and Coordinators Conferences, 1968 and 1969. The Service had also a medical exhibit at the American Congress of Medical Rehabilitation Convention, 1969.

### Personal Rehabilitation

Whenever we suffer a great loss, trauma or setback we experience a 'psychological paralysis' that varies from mild discouragement to deep depression. In the context of a physical disability Beatrice Wright[1] described the psychological paralysis as a "mourning period" during which a patient is "in mourning" for the lost part of himself. A major contribution to be made in recognizing this phenomenon stems from whatever constructive efforts we can make in 'breaking through' to the patient to help him rescue himself from his own depression and emerge with motivation for the desire to live.

Recently there has also been considerable concern about the 'chronic patient' who for years has exhibited lack of motivation to become rehabilitated. This "longterm mourning" can be seen as an extension of Wright's acute temporary mourning period. It was the discovery of this extension that

---

*Chief, Physical Medicine and Rehabilitation Service, Glenn Dale Hospital, Glenn Dale, Maryland 20769.
†Medical Director, Glenn Dale Hospital.

contributed much more meaning and significance to all of our research.

A major initial research concern centered on finding and developing a method of 'getting through' to these psychologically paralyzed patients. This developed into reaching below the level of their emotional numbness and establishing contact with them at a deeper level; it meant relating to them and being with them often without words. In their depression they could not hear us, but they could feel that we were with them. Following recovery, many of them remarked that they probably never would have come out of it if they were either left alone or pushed too hard. This also suggests the potential importance of the patient 'making it' himself even if at first it takes the deeply concerned presence of another person to 'launch' him.

The 'gutsy' relationship can be the important first step, for example, many patients who did not have the benefit of this basic contact were followed-up through the process of rehabilitation, but it did not take hold and they never really 'got with it.' They went through the motions of rehabilitation without achieving the desired result. When we then back-tracked to the establishing of basic contact (usually but not always successfully) a re-run then produced effective results.

Establishing basic contact means getting through to another person in a way that wakes him up, 'turns him on', and gets him going. Many physicians, rehabilitation therapists, nurses, aides, social workers and other paramedical personnel have an obvious aptitude for doing this; some people 'turn you on' and others just 'turn you off'. We have identified the ones who are 'high motivators' and utilize them to establish and help maintain the therapeutic effects of the basic contact.

Part of our research, guided by James Drasgow[2], has been concerned with discovering more about these high motivators. As a result, it has been found that in the rehabilitating context they are the same type of people as a group of previously reported "high facilitators" in other contexts (Carkhuff, Vol. I & II).[3] Symptomatically, they express themselves more genuinely, more concretely, and more helpfully than other people. They are more personally concerned about others and communicate this concern in a way that the patient uses it to become more concerned about himself and his progress. They motivate motivation.

There is a tendency among professional rehabilitators to claim that many 'rehab' failures are due to a lack of motivation in the patient. The research results from high motivators indicate that the lack of motivation may often be in the rehabilitator.

But motivation alone is not enough. Many highly motivated patients do not get better; they just 'get'. The problem here involves helping them to get together with themselves. They often run out ahead and away from themselves; they avoid a direct confrontation with themselves. It is, in effect, sometimes necessary to introduce a patient to himself. It is often true that they have been running away from themselves because they see only their handicaps and all that is wrong with them; they do not want to meet or associate with that part of themselves. We introduce them to their 'better half' and help them to get together with their assets. When we bring the person together with himself in this way we help to integrate motivation with direction. It also suggests that the most basic of all contacts is that of the person with himself, and our efforts may well be directed toward helping the patient get acquainted with the best he has to offer himself.

Our efforts to provide rehabilitation services that are equipped with the latest developments in hardware and technique often seem to provide more than many patients are ready or able to use, and as a result the patient sometimes appears to be left behind. To help him catch up and 'get with it', the basic contact must often be re-established or re-affirmed. It is this 'psychological refueling' that provides reinforcement for the patient's additional effort and commitment to succeed in the rehabilitation process. And quite naturally, it is when the patient can psychologically refuel himself that he becomes self-motivating.

To help achieve self-motivation a patient needs to feel that he is 'worth it' and that there is enough good left in him to motivate. In effect, we must often teach a patient to respect himself and to appreciate what is still good and useful in him. Treating a patient with great respect not only gets through to him and helps him feel better as a psychotherapeutic experience, but it is also useful as a way of teaching him to help himself more. The high motivators are also gifted in their ability to communicate great respect in both words and actions; with their help the patients improve sooner and at a faster pace.

As long as the patient is 'hung up' with what is wrong with him, he tends to make little or no progress. We have found that improvement is expedited when we help a patient to become more involved with what is still right and useful to him. Progress is built more on expanding what is good in him and adding more that is also good than it is by just trying to get rid of what is wrong.

Another of our major findings over the past 15 years has been that these aspects of personal rehabilitation apply equally well to the visibly and non-visibly handicapped as well as to the psychiatric patients. Perhaps it simply took a patient context to help discover some things that are actually applicable to all people.

Our current researching has discovered that some patients continue to get much better after they have been 'cured.' (Fig. 2) Being 'cured' often means achieving as near as feasible normal health, but many of our patients have continued to achieve further increases in physical and psychological health. Their follow-up reports indicate that they have simply continued doing what they started out doing during our earlier stages of personal rehabilitation. These 'continuing gainers' have really started where we left off and are going 'all the way'. They are the ones who not only make our work and us feel more worthwhile, but also provide themselves as rich sources for us to learn more. Continuing research and discovery with them also has the additional virtue of the results being potentially applicable to the beginners so that they too may continue to improve after we have terminated treatment.

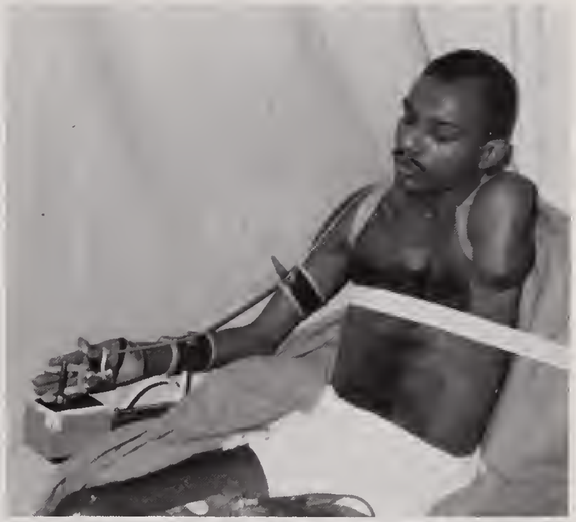


**FIG. 2. Contractures of legs released by boiling water injection into subarachnoid space, severely contracted left arm amputated, minimal active motion in right arm harnessed to operate an electric wheelchair. Patient is going all over the hospital by himself.**

### Injection of Boiling Water or Physiologic Saline into Subarachnoid Space for Treatment of Spastic Paraplegia

In cooperation with Dr. Stacy Rollins, M.D., neurosurgery consultant, this Service introduced a simple, safe and effective method of treating spastic paraplegia. The spastic contractures developed by the paraplegic patient are often severe and interfere with regular nursing attention and definitive rehabilitation of the patient. When there is no useful neurological function below the level of injury, the conversion of a spastic paraplegia into a flaccid paraplegia renders the condition more manageable. The injection of boiling water or saline solution into the subarachnoid space is effective in transposing a spastic paraplegia to an acceptable flaccid posture. The heat generated by the boiling water sufficiently destroys the function of the peripheral roots of the cauda equina to create a lower motor-neuron lesion. The heat is rapidly dissipated in the subarachnoid space so that there is no injury produced to functional neural elements. The simplicity and safety of the procedure make it preferable to laminectomy and direct transection of the nerve roots.

The task is accomplished by performing a spinal puncture and injecting rapidly from 5 to 10 cc of boiling water or saline solution. The effect of the injection is determined immediately by testing the spasticity of the extremities. Additional injections may be made immediately thereafter until the desired level of flaccidity has been developed (Fig. 3A, B & C).

### Osteotomy in Bilateral Extensive Myositis Ossificans of Both Hips in Paraplegics

Myositis ossificans about the hips is seen not infrequently in quadri- and paraplegics. Often very extensive myositis ossificans in paraplegics bilaterally in hips immobilizes the joints. The loss of motion in hips is due to extra-articulate ossification. The joint itself appears normal. Loss of motion in the hips causes discomfort or pain when the patient sits in a wheelchair or car. It impedes vocational rehabilitation. In coöperation with Dr. Barrett Goldstein, orthopedic consultant, an osteotomy operation which removes the upper part of the femur and the extra-articular ossification was devised. The distal fragment of the femur is covered with a silastic cap[4] in an attempt to block the myositis ossificans from re-attaching to the remaining portion of the femur. This results in flail hip joints and in ability to position the legs in the desired position and to sit upright comfortably (Fig. 4A & B, Fig. 5A & B.)

Current projects include: 1) In conjunction with George Washington University, "Changes in Cerebral Language Dominance Following Unilateral Brain Damage," 2) "Motivation as an Important Index for Successful Adjustment of Multiple Handicapped Patients" (this is the continuation of earlier projects).[5] and 3) To study self concepts and body images of physically handicapped patients.

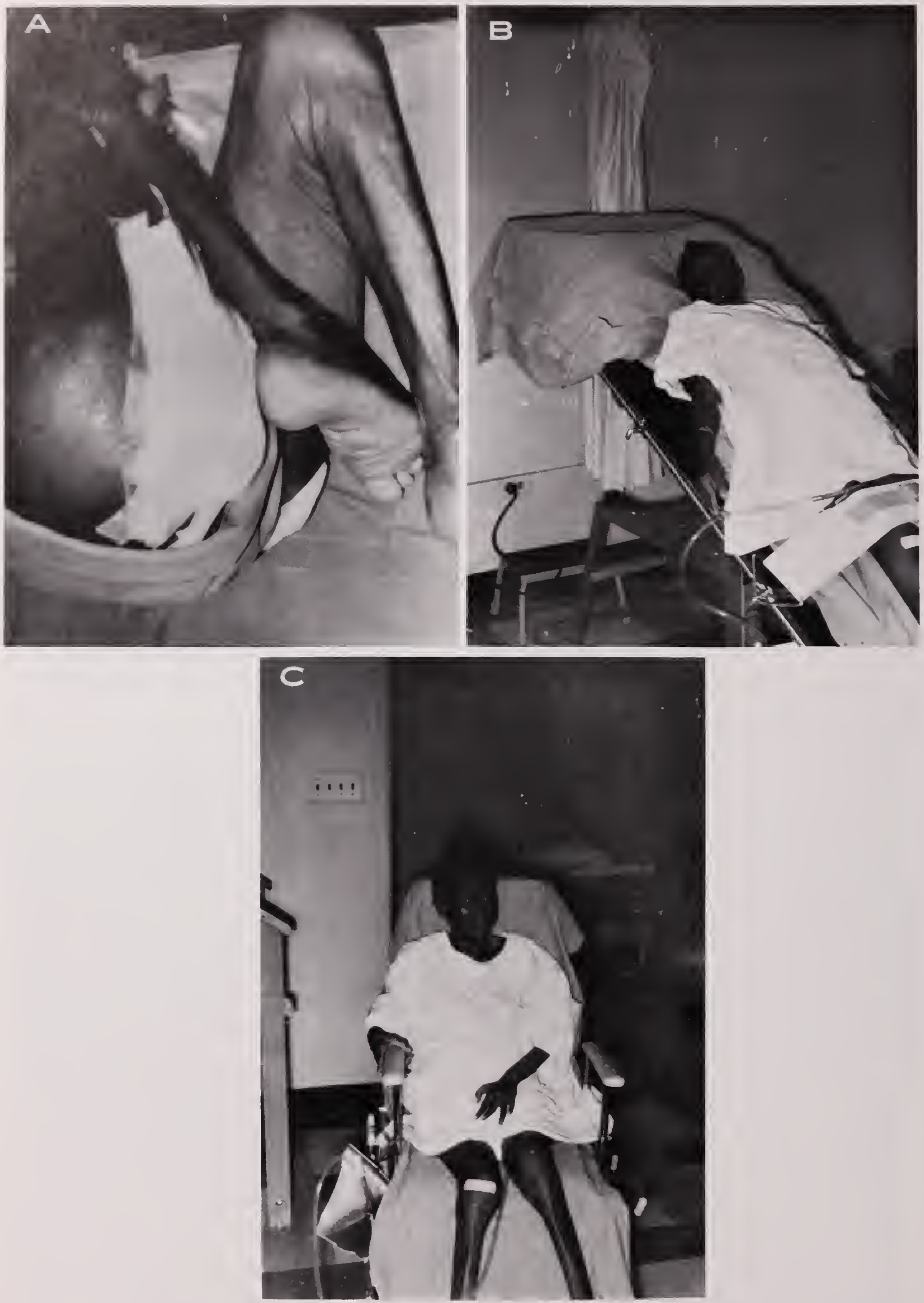


FIG. 3. (A) Flexion contractures in a paraplegic (B) A day after injection of boiling water into subarachnoid space (C) As soon as the decubitus ulcers improve.

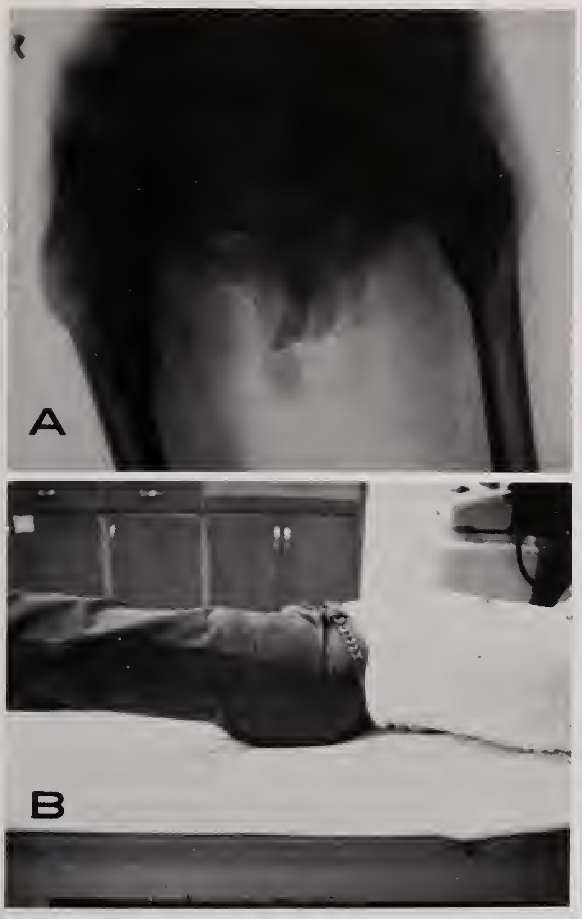


FIG. 4. Myositis ossificans of hips limit range of motion of hips.

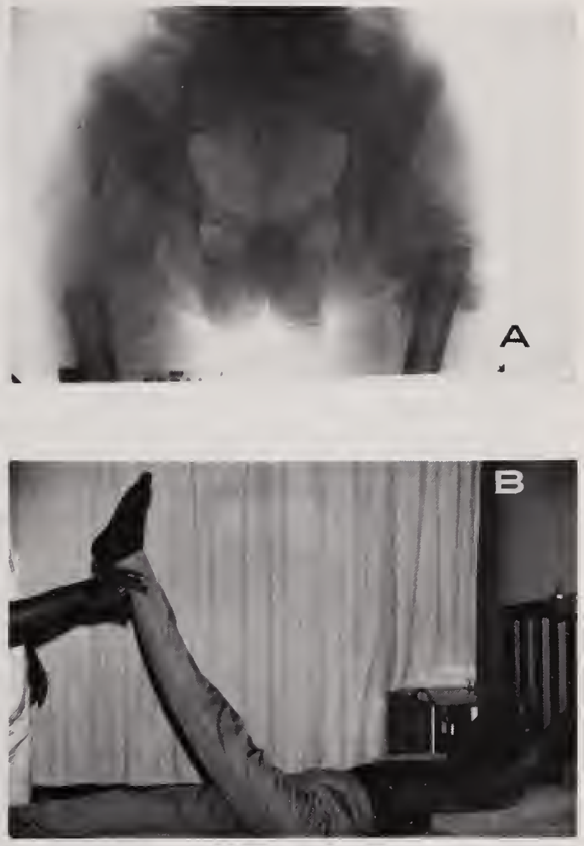


FIG. 5. After osteotomy, patient's hip has good range of motion.

## References

1. WRIGHT, B.: Physical Disability–A Psychological Approach. New York: Harper & Row, 1960.
2. DRASGOW, JAMES, PH.D., Consultant University of New York, Buffalo, New York; Assistant Chief Vocational Service, Veterans Administration Hospital, Buffalo, New York.
3. CARKHUFF, R.R.: Helping and Human Relations, Vol. I & II. New York: Holt, Rinehart, and Winston, 1969.
4. Silastic cap manufactured by Dow-Corning, Midland Michigan. Used before by Dr. McDowell, Richmond, Virginia.
5. A. MADHU, TUMKUR, M.D.: Predicting Adjustment to Disability via Psychological Tests. 41st American Congress of P.M. & R., 1963.
   B. MADHU, TUMKUR, M.D. AND DRASGOW, JAMES, PH.D.: A New Approach to Predicting Rehabilitation Potential with Psychological Variables. 42nd American Congress of P.M.& R., 1964.
   C. MADHU, TUMKUR, M.D. AND DRASGOW, JAMES, PH.D.: New Methods of Increasing Motivation in Rehabilitation. AMA Annual Sessions, June, 1968.

# Health Services Branch*
# District of Columbia Department of Human Resources

Z. OZELLA WEBB, M.D.†

THE HEALTH SERVICES BRANCH of the Department of Human Resources, Social Services Administration is responsible for the total health care (either in delivery or in securing the delivery) of approximately 2,500 District of Columbia children living in foster homes or private institutions throughout the Greater Metropolitan Area.

These are the children who have come into the care of the Child Services Division of the Social Services Administration (formerly Child Welfare) by court commitment, by authority of parents on their direct request, or by request of the police when their parents or guardians cannot be located. They cannot remain in their own homes because of parental or guardian desertion, neglect, abuse, or inability to provide the necessities of life either temporarily or for longer undetermined periods.

Once a child comes into care, he is given a complete health examination and scheduled for subsequent appointments depending upon his age and his needs. Infants and children are taken through the full range of immunizations and boosters as recommended by the American Academy of Pediatrics. This procedure is in accordance with the Child Welfare League of America, a standard-setting organization which establishes criteria for accreditation of child-caring social welfare agencies and institutions. The Child Welfare League has stated "Childcaring agencies have a major obligation to safeguard the health of children for whom they provide foster care, an obligation that demands a continuous program of health and medical services . . . The nature of the service which the agency undertakes demands a program for health and medical care that will meet the specific needs of each child."[1]

In December 1968, Health Service acquired its first full-time medical director, a pediatrician. Prior to that time administrative responsibility resided with a public health nurse supervisor. At various times 4 or more pediatricians and 2 or more general practitioners have given service on a contract basis to children during approximately 5 health conference sessions weekly. These physicians also made themselves available to answer medical questions which fell within their domain.

The present staffing pattern of the Health Service Section includes a medical director, 3 regularly scheduled pediatricians, 1 general practitioner, a public health nurse chief, a public health nurse supervisor, 7 public health nurses, 3 licensed practical nurses, 2 secretaries, other ancillary clerical staff, and volunteers (Chart 1).

Health Services Branch also has a Medicaid and medical records unit with a supervisor and 2 Medicaid clerks. The supervisor of this unit carries the additional responsibility for our system of keeping medical records. The medical records are standard hospitalization records which are exchanged with our public institutions should the child leave the community to go into a public institution, or should he come from a public institution to go into foster home placement in the community.

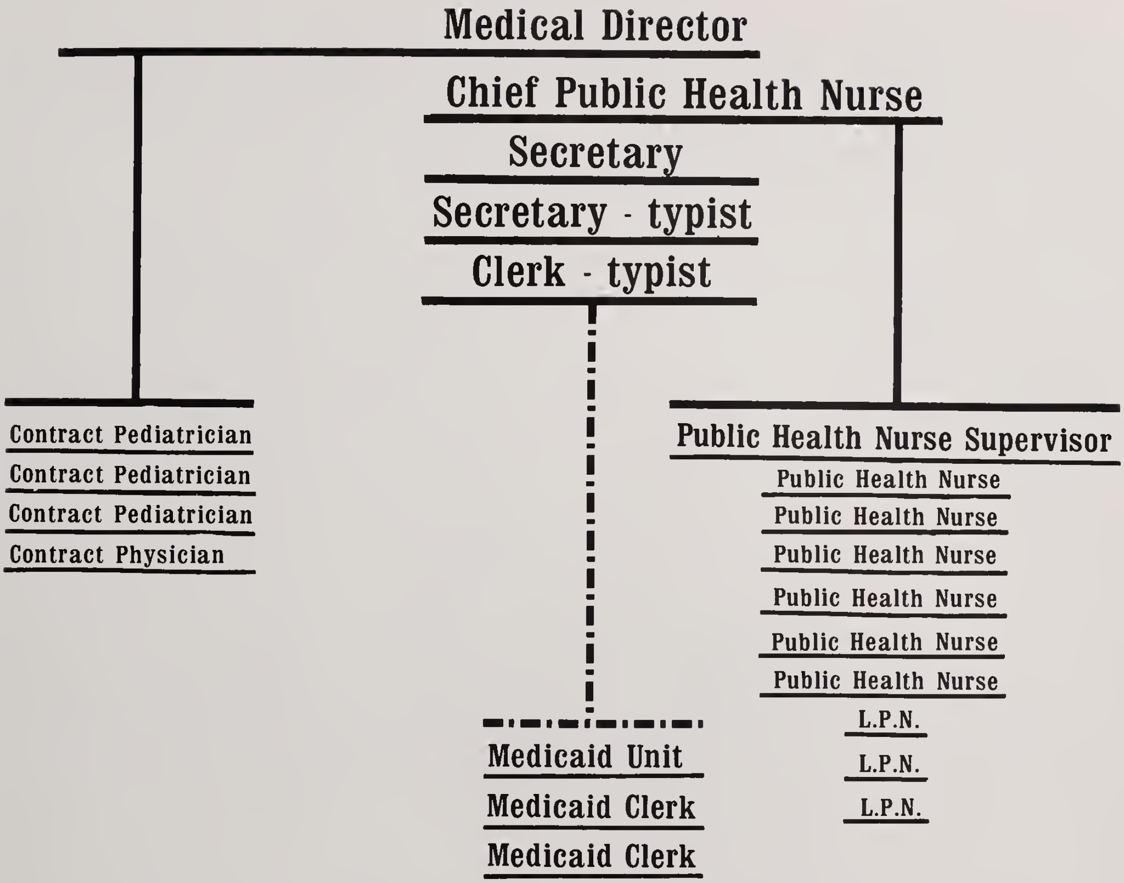
Every child has his own Health Service nurse. If he is ill or in an accident, the foster parent contacts the nurse. Depending on the situation, the nurse may have the child brought in to our facility for physician evaluation or she may refer him to a hospital or physician in the community. Specialists and specialty facilities are used when indicated.

All children in care of the Social Services Administration are eligible for Medicaid. They may be seen by Medicaid vendors for health care. Our major concern is for the child's continuing health care and our knowledge that he is receiving this care. Referral forms are given foster parents to take with them whenever the child is taken for health care. This form is to be completed by the physician and returned to us. It then becomes part of his ongoing medical record.

---

*A similar article describing functions of the Health Services Branch before reorganization of the Social Services Administration appeared in Vo. 62, NMA Journal, May 1971, Pp. 226-227.

†Medical Director, Health Services Branch, D. C. Department of Human Resources, Social Services Administration; Clinical Assistant Professor of Pediatrics, Georgetown University School of Medicine.


Medical Director
Chief Public Health Nurse
Secretary
Secretary - typist
Clerk - typist
Contract Pediatrician
Contract Pediatrician
Contract Pediatrician
Contract Physician
Medicaid Unit
Medicaid Clerk
Medicaid Clerk
Public Health Nurse Supervisor
Public Health Nurse
Public Health Nurse
Public Health Nurse
Public Health Nurse
Public Health Nurse
Public Health Nurse
L.P.N.
L.P.N.
L.P.N.

Many physicians in the Metropolitan Area may first gain knowledge of our service and our responsibility when a child in foster care is referred to him for specialist medical care. Generally such a specialist would be a Medicaid vendor and payment for service would be through the Medicaid system.

In other instances children may be located in communities which have no physician subscribing to the D. C. Medicaid system. In such cases, after prior clearance for financial reimbursement, services would be obtained on a fee-for-service basis. In either of the above situations it may be Health Services nurse who arranges the appointment.

"The medical assistance program of the District of Columbia is a Federal-local cooperative effort to provide payment at public expense for comprehensive medical care of high quality to all eligible citizens in our community . . .

The total medical assistance program of the District of Columbia includes a component referred to as the Medicaid Program, which was made possible by title XIX of the Social Security Act. This act allows limited Federal financial aid to states willing to contribute local funds in an effort to provide medical care for individuals unable to pay for such care."[2] Title XIX Grants to States for Medical Assistance Programs was enacted July 30, 1965.[3]

In cases requiring hospitalization, surgery, anesthesia, or emergencies such as accidents, only the Director of the Social Services Administration or her designate may sign permission for treatment. Foster parents are given these instructions on first coming into the Department. They have an emergency telephone number which they may call at night or on the weekend if the need arises, so that at all times they are aware of our continuing support and responsibility.

Since the Division's responsibility is for total care and planning, Health Service staff must work closely with social workers, schools, foster parents, hospitals, and public health community resources, private physicians, corporation counsel (the legal arm of the D. C. Government), institutions, and other professionals.

The administration of programs of medical care required a joint effort and a shared responsibility between public health and public welfare. Cooperation has been allowed to take various forms as states and localities adopted federal grants-in-aid and other federally funded programs to suit the particular needs of their own localities. Various arrangements are accepted throughout the country including:

1. Provision of health care on an individual or group basis with practitioners and hospitals reimbursed for authorized services.

2. Responsible department (health or welfare) may provide medical care itself through employment of physicians and other health personnel, full or part-time.

3. Responsible departments may purchase protection from voluntary insurance plans such as Blue Cross and Blue Shield.

4. Agencies may arrange purchase of medical services directly from medical societies or similar professional organizations.

Under any of these arrangements adequate reports on the number and kinds of services should be made to government agencies financing the services and the interests of the patient safeguarded through periodic review of the quantity and quality of care.[4]

In communication with 5 state departments of public welfare, it was learned that none has a system similar to the District of Columbia's. The state of Colorado has a medical assistance program which it initiated on January 1, 1969 under provisions of a state plan and Title XIX. As part of the Colorado plan,[5] fee structures are established which limit participation to those providers who will accept as payment in full the amount paid in accordance with the established fee structure. State agency staffing for medical assistance programs includes a full-time director, who is a physician; a full-time deputy-director, who has a Bachelor's degree in medical-care administration; a full-time social worker, part-time dentist, part-time pharmacist, and additional staff as deemed necessary.

The state of Connecticut maintains part-time medical consultants in each district office available for help or consultation on medical problems.[6] Fee structures and schedules are established for various services and care. Choice is left to the practitioner as to whether or not to participate at the established rate of pay. Title XIX also is incorporated into this plan.

California developed health service guidelines jointly from medical and social service criteria.[7] Children in foster care are eligible for full range of medical services provided for any public assistance recipient, and through the same health delivery system. The child uses the same medical vendors and resources the foster mother might use for her own children. The fee for payment is set on the same basis as the physician would charge other assistance recipients.

The state of Arizona administers its program through offices in 14 counties.[8] The county board of supervisors is responsible for provision of health care. Local health authority establishes guidelines, and their administration is affected by medical directors appointed by the board of supervisors. In smaller, rural counties private physicians are under contract to provide services as needed. There is some variation in health care from county to county.

The state of Massachusetts has had a comprehensive medical-care program for all recipients of public welfare since 1954.[9] In September 1966 the provisions under Title XIX were incorporated into the program. All children receive similar benefits. Free choice of physician is guaranteed by the program. Guidelines for each profession are drawn by task forces working in the state department of public health which by law establishes professional standards and guidelines. The department's fee schedule is based on fee-for-service reimbursement.

Our own Social Services Administration in addition to the Health Services Branch and Title XIX, which provides Medicaid reimbursement to vendors, has a budget which provides payment for the medical care of any children placed outside the Metropolitan Area. This budget is often needed for foster children who are allowed to go with foster parents on vacations or even to live in another city.

The District of Columbia has some governmental features of a city, a county, and a state. The District's method of delivering health care to foster children has grown out of the investment of legal responsibility for giving permission or consent for medical care in the Director of the Department of Public Welfare by the Congress of the United States and the former District of Columbia Board of Legal Guardians. What began in 1922 as a responsibility for reporting the child's physical condition to the court at the time of guardianship proceedings through a physical examination has now become an entire health service which addresses itself to total health care from infancy to 18 years of age, or to 21 years of age, depending on the type of court commitment.

In a review of 104 case records of children in foster care, which were pulled at random it is of interest to indicate the relative numbers of children of different ages with diagnosed medical problems warranting treatment at the time of initial examination ‡ (Chart 1). The number of children in various categories is shown in table 1.

The medical diagnoses in referred cases as given in table 2.

Children placed in foster care through Child Services are in the broadest sense the responsibility of the District Government. It is thought-provoking to realize it required an entire agency to provide those

---

‡ Initial examination–Physical examination on entrance into SSA for Foster Care.

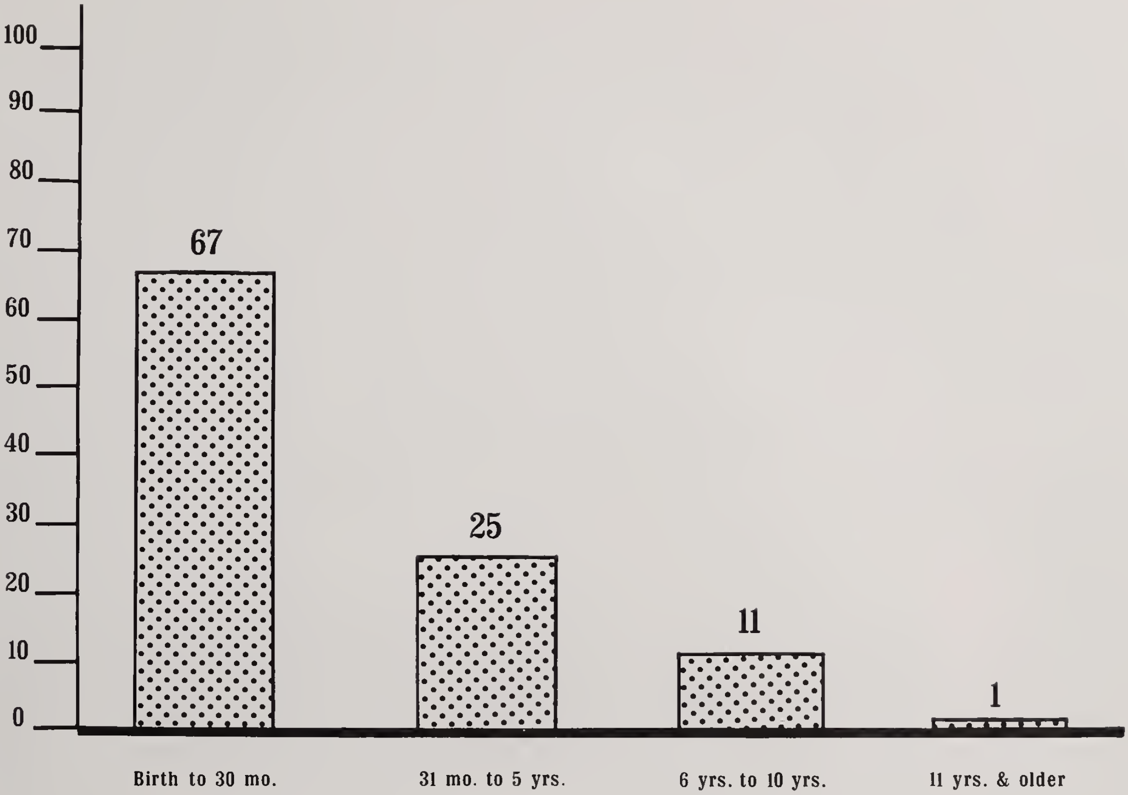


TABLE 1: Number of Children in Various Categories

Number of Children well on initial examination

Birth-30 mo.–37
31 mo.-5 yrs.–9
6 yrs.-10 yrs.–2
11 yrs.-13 yrs.–0

Number of Children treated by Health Services Physicians

Birth-30 mo.–23
31 mo.-5 yrs.–7
6 yrs.-10 yrs.–4
11 yrs.-13 yrs.–1

Number of Children referred and source

| | Private M.D. | Hosp. OPD or Spec. Clinics | Hosp. In-Svc. |
|---|---|---|---|
| Birth-30 mo. | 2 | 4 | 1 |
| 31 mo.-5 yrs. | 3 | 6 | 0 |
| 6 yrs.-10 yrs. | 0 | 4 | 1 |
| 11 yrs.-13 yrs. | 0 | 0 | 0 |

TABLE 2: Diagnoses in Referred Cases

Birth to 30 months

External tibial torsion
Convulsive disorder due to early brain damage
Bilateral undescended testicles
Battered child with probable psychomotor retardation (2)
Allergic constitution–intrinsic and extrinsic
Birth injury and neurological deficits

31 months to 5 years

External strabismus
Tonsillitis with hypertrophy (2)
Behavior disorder
Phimosis
Hydrocephalic
Hypertrophied tonsils
Cardiac hypertrophy
Hydrocele
Knock knees

6 years to 10 years

Phimosis
Rheumatic heart disease
Hydrocephalic and convulsive disorder

necessities and services one set of parents ordinarily supplies.

When employed as a pediatrician with the District of Columbia Health Department, neither I nor the majority of my colleagues knew much about health-care provisions for children in foster care. My purpose, therefore, has been to acquaint you with a little known but very extensive resource–Health Services Branch in the District of Columbia Department of Human Resources, Social Services Administration.

## References

1. Child Welfare League of America, Health Services for Children in Foster Care, 1955.
2. Government of the District of Columbia, Department of Public Health, Supplement IV, 7-68.
3. Compilation of the Social Security Laws, 89th Congress, 1st Session, House of Representatives, Document #312.
4. American Public Welfare Association, Tax Supported Medical Care for the Needy, Public Welfare, October 1952.

Letter of Correspondence

5. State of Colorado, Department of Social Services, Franklin L. Bowling, M.D. M.P.H., R.Ph.
6. State of Connecticut, State Welfare Department, Majorie G. Siskey, Chief, Child Welfare.
7. State of California, Health and Welfare Agency, E. H. Newman, Deputy Director Program Services Branch.
8. State of Arizona, Department of Public Welfare, Alan M. Margolin, ACSW. Director Family and Child Services Division.
9. The Commonwealth of Massachusetts, Department of Public Welfare, Jack Guveyan, Acting Director, Department of Public Welfare.

# Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help—for these four very good reasons:

**Appeal** With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Campbell's
CONDENSED
SOUP

**Nourishment** Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

**Convenience** Within 4 minutes a bowl of delicious soup is heated and ready to eat.

**Economy** Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

# Break the ulcer circuit to hyperacidity, hypermotility and ulcer pain.

**Pro-Banthine®**
propantheline bromide
**A Relief Factor in Peptic Ulcer**

Worry, frustration, job pressure—all set up excessive vagal currents in patients with peptic ulcer.

Pro-Banthine "insulates" the stomach, the duodenum and the lower intestinal tract—the sites where these destructive currents take their toll.

This "insulation" helps block excessive enteric activity and acidity, thus helping to provide the proper environment for the healing of peptic ulcers.

It's nice to know that Pro-Banthine provides this protection at a dosage that causes little or no discomfort and that, unlike ataractic agents, Pro-Banthine does not cloud the patient's awareness or thought processes.

By moderating excessive vagal currents Pro-Banthine relieves spasm, acid burn and pain. By reducing gastric motility Pro-Banthine also prolongs the activity of antacids.

*Indications:* Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.
*Contraindications:* Glaucoma, severe cardiac disease.
*Precautions:* Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

*Side Effects:* The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

*Dosage:* The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

SEARLE *Research in the Service of Medicine*
Distributed by G. D. Searle & Co., P. O. Box 5110, Chicago, Illinois 60680

Triaminic
Relieves stuffy and runny noses- promptly.
Makes your patient's world a little sunnier.

# Triaminic®

phenylpropanolamine hydrochloride, pyrilamine maleate, pheniramine maleate

# "the Sunshine Tablet"

**Formula:** Each timed-release tablet contains phenylpropanolamine hydrochloride, 50 mg.; pyrilamine maleate, 25 mg.; pheniramine maleate, 25 mg. **Indications:** Relief from such symptoms as nasal congestion, profuse nasal discharge and postnasal drip associated with colds, nasal allergies, sinusitis and rhinitis. **Precautions:** Patients should not drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in the presence of hypertension, hyperthyroidism, cardiovascular disease, or diabetes. **Side Effects:** Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. **Dosage:** Adults—one tablet swallowed whole, in morning, midafternoon and before retiring. **Availability:** In bottles of 100, 250.

Rx
ONLY

**Dorsey Laboratories, Lincoln, Nebraska, 68501**

# President's Page

## HMO'S—WHAT'S IT ALL ABOUT?

The initials HMO have been seen with increasing frequency. These initials stand for Health Maintenance Organization. Why all the excitement about HMO's and what does this mean to those of us in private practice of medicine? As everyone knows, there has been considerable criticism of the current method of delivering health care services. The system is being attacked on all fronts for inadequate personnel-medical and paramedical, excessively high costs, lack of services to the poor, and over-utilization. In addition, there has been a strong consumer interest in the nature of health care services, in the delivery of these services, as well as the costs to the individual consumer. This is a hot issue in Congress today because of its appeal to the middle and lower-income groups. There are many examples of national health systems in other countries with both advantages and disadvantages to all parties concerned.

Currently, hearings are being held by Congressional committees to evaluate the various proposals for some type of national health service program. I think it is important that we recognize that some time, some type of system is coming, and that it is better that we be part of this system in the planning stage than be forced to accept it after the fact.

Your society has taken the position that the more input we have in the planning stage, the more apt we are to have a final product we can live with.

HMO's represent one method for providing care in a group practice setting operating on a prepaid basis. In most instances HMO's work on a capitation formula. Current programs around the country indicate that this need not be the case. It is possible to have an HMO "without walls" in which all the members of our medical society, or for that matter, the entire metropolitan area, might be participants. The program may be a prepaid plan, but one in which a "fee for service" may still be in effect.

This was brought out clearly at the Scientific Assembly, when Dr. Zapp from the Department of Health Education and Welfare explained the Administration's position.

We are all interested in the most efficient and highest quality medical care. The development of HMO's will provide the patient with another option to choose from. There may be many kinds of HMO's within our own metropolitan area, each offering a slightly different kind of program of benefits. Physicians may be participants in more than one kind of HMO, or he may choose not to participate at all.

This is, in fact, in the American tradition for the physician to choose for himself any one of a number of ways in which he prefers to practice. By the same token, the patient has multiple options as well. The solution we have all been searching for may rest in the preservation of these options: improved health care delivery, preservation of individual physician's rights, and maintainance of a high level of medical care.

Marvin C. Korengold

R M K

*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

CAPITAL NURSE REGISTRY

(Est. 1910)

Licensed
Practical
Nurses and
Practical
Nurses
Recommended
by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding
Registries, serving physicians
and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

*24 Hour Telephone Service*

RAndolph 3-2600 or 3-1771

**MAXWELL AND TENNYSON INC.**

*Pharmacists*

916 Nineteenth Street, N.W.

SERVICE TO
PHYSICIAN & PATIENT
SINCE 1926

PHONES
223-4711
223-9797
223-9798

# Editorials

## Physicians' Leadership in the Decade of the '70s

Raymond L. Standard, M.D., M.P.H.

Comprehensive health services must be both conveniently available and readily accessible in all areas of large urban communities, especially in those neighborhoods inhabited by the medically indigent, before there can be any significant reduction in mortality and morbidity.

The health problems of the District of Columbia and many other cities of comparable size are compounded by the maldistribution of physicians and other health professionals within their boundaries. The ratio of actively practicing physicians to population for the nation is 1:1000; the ratio in the District of Columbia is 1:500 residents. Although the number of actively practicing physicians in all specialties, except general medicine, is more than adequate to meet the health needs of the District's population, the city's high morbidity and mortality statistics do not reflect this potential adequacy of health care.

Service Areas 3, 4, 6 and 7 of the District of Columbia in which morbidity and infant mortality statistics are significantly higher by comparison to the rest of the city are the same areas in which the least numbers of actively practicing physicians' offices are located. These Service Areas, with the greatest density of population per square mile, or 57% of the total, repeatedly yield the highest numbers of newly diagnosed cases of infectious syphilis (68% of total cases), tuberculosis (66% of total cases), and other communicable and chronic diseases. Almost 70% of the city's infant mortality rate, the "great yardstick" of measuring the level of health care of a community or nation, is contributed by these Service Areas. Many other social ills associated with poverty and minority deprivation contribute to these health indices, but the lack of accessibility to comprehensive medical care is also a significant factor.

The physicians actively practicing in these four Service Areas (3, 4, 6, 7) represent only 20% of the total, while almost 70% are located in areas 8 and 9, mostly concentrated in the downtown, office-building complexes.

During the decade of the '60s most large urban communities experienced an increasing emigration of the affluent and middle class population to suburbia. Many physicians and other health professionals also followed this path, while those remaining in the cities have concentrated their offices either in downtown, high-rise office buildings or in the few remaining affluent residential areas.

During this same decade there was an increased immigration of the young, minority poor. Many elderly inhabitants of the city, especially the indigent, have remained in the inner city. Most of these two categories of residents contribute little to the tax rolls of the cities, yet they require many public services to maintain their minimal basic needs for daily living.

Prior to the '60s, most large urban communities maintained municipal hospitals and a few categorical clinics for immunizations, venereal disease and tuberculosis control. During the last decade, however, city health departments have found it necessary to establish neighborhood-based, primary or comprehensive health care centers to fill the vacuum created by the private physicians' changing patterns of office location. Thus, city health departments became the "family doctor" for many of the urban poor who could not pay the cost of minimal health care.

In October 1968, the Medicaid Program was started in the District of Columbia. For the first time, the city's medically indigent were able to seek health care with dignity from the private sector rather than from the "charity" hospitals and clinics created out of necessity. Many of these residents, however, have become increasingly frustrated by the lack of accessible comprehensive health care services in their communities. This frustration has driven many Medicaid recipients back to the overcrowded waiting rooms of city hospitals that previously contracted to treat "charity" patients. Often on admission to the hospital as in-patients, these Medicaid recipients are assigned at random to attending physicians with whom they have had no previous doctor-patient relationship. This is the same "charity" case assignment pattern with one exception, the attending physician is now paid for his professional services by the Medicaid Program. The doctor-patient relationship usually terminates when the patient is discharged to the hospital clinic or until a future illness requires re-admission. This absence of a true doctor-patient relationship was certainly not the intent of the Title XIX legislation.

The public has become fully aware that the continued co-existence of both public and private health care is incompatible with quality health care for all. Community action groups and non-medical corporations have assumed the leadership in developing private, comprehensive neighborhood health centers in many urban areas to replace public health clinics previously established to offset the maldistribution of health professionals.

Three of the most critical questions facing the physicians in private practice in the '70s are:

Will physicians assume the necessary leadership in designing a new quality health care delivery system?

Will this leadership role provide aggressive action for change or "foot dragging" inaction for the status quo?

Will the physicians' sincere commitment to change strengthen his future role as the employer rather than as employee in the new system?

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*Associate Director, Department of Human Resources*

Miltown®
(meprobamate)

**Still serving...**

**Miltown®**
(meprobamate)

WALLACE PHARMACEUTICALS

## A Key to Successful Preventive Medicine

The Conference of State and Territorial Directors of Public Health Education recently issued a position statement explaining the importance of health education as a key to successful preventive medicine. In effect, members of the Conference, who represent all of the states and territories of the United States, are repeating a message which has been heard often but not always understood.

The reason for this is simple. Health education is both a general concept and a specific discipline at the same time. All health professionals are to some degree health educators in that they impart information to those with whom they associate. However, as important as this is, it is not the kind of health education that the Conference is talking about.

They are talking about comprehensive health education which begins with the individual and his family, and then reaches far beyond to local, state, and the national community. They draw select tools from psychology, sociology, and education which will not only inform but motivate large numbers of people to seek care for health problems.

For today's health problems, a coordinated program of health education begins whenever preventive measures are contemplated. The health educator functions best when he is brought into the earliest stages of health planning and policy development. Only then can he plan and coordinate the steps by which he will stimulate and involve large numbers of people to take the responsibility of seeking available health care.

It is not an easy task to explain how the health educator functions. The situation determines his direction. For example, in the District of Columbia, health education aides who are proficient in the language and acquainted with the culture of their neighbors are trained to visit households for the purpose of explaining health resources and exercising utilization of health facilities.

For other health problems, perhaps a community immunization program, the health educator might choose to plan a mass media presentation, coordinating press releases for various publications with spot announcements on radio and television. Or more intensive campaigns might require guest appearances for authoritative speakers or feature stories slanted to the interest of those whose interest he hopes to attract.

In some cases the health educator might concentrate on community organization techniques in order to involve large numbers of people in solving their own problems. This is most effective in community settings where large numbers of people can be mobilized.

A trained health educator is far more than a source of information. He is a specialist in involvement and motivations, and ultimately in evaluation, because he knows how many people have responded to his program—how many children have been immunized—how many pregnant women came for prenatal care—how many children were tested for lead poisoning.

This is the kind of health education that the Conference of State and Territorial Directors of Public Health Education are talking about. This is the kind of health education that can provide a firm foundation for successful preventive medicine.

With an increase in population, health problems depend upon the investment we are willing to make in order to modify behavior and encourage participation in health programs.

ROBERT H. CONN,
*Deputy Director, Office of Public Affairs,*
*D.C. Department of Human Resources and*
*President, Conference of State*
*and Territorial Directors of*
*Public Health Education*

THE BALANCED RETIREMENT PLAN

**A KEOGH ACT PROGRAM with a wide range of both guaranteed and equity investments. Pension and profit-sharing plans for professional corporations also available on a group basis.**

**Co-sponsored by the Medical Society of the District of Columbia**
**For information call or write--**

**Suter Associates Retirement Planning Company**

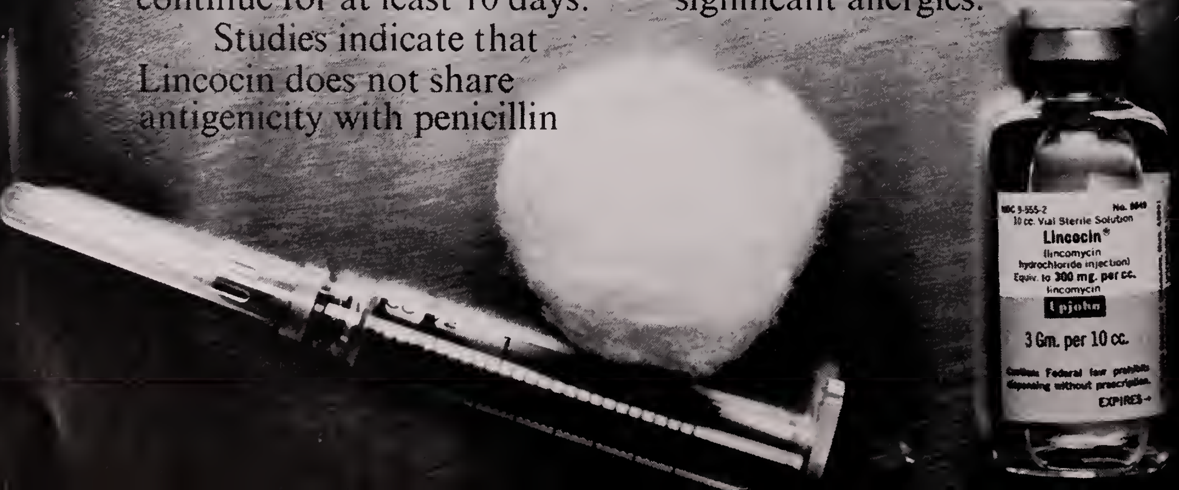
**2545 Wilson Blvd.** **Arlington, Virginia 22201**
***Telephone:* 525–6700**

# Hypersensitivity to penicillin is a good reason to consider Lincocin®

## (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With ß-hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.


10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv. to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits
dispensing without prescription.
EXPIRES→

# So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

● Sterile Solution (300 mg. per ml.) ●

# Lincocin®

## (lincomycin hydrochloride, Upjohn)

10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
Federal law prohibits
dispensing without prescription.
EXPIRES

© 1971 The Upjohn Company

● Sterile Solution (300 mg. per ml.) ●

# Lincocin®

## (lincomycin hydrochloride, Upjohn) for respiratory tract, skin, soft-tissue, and bone infections due to susceptible streptococci, pneumococci, and staphylococci

| Each preparation contains: | Lincomycin hydrochloride monohydrate equivalent to lincomycin base |
|---|---|
| 250 mg. Pediatric Capsule | 250 mg. |
| 500 mg. Capsule | 500 mg. |
| *Sterile Solution per 1 ml. | 300 mg. |
| Syrup per 5 ml. | 250 mg. |

*Contains also: Benzyl Alcohol 9 mg.; and, Water for Injection—q.s.

An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. *Local reactions*—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: *250 mg. and 500 mg* Capsules—bottles of 24 and 100.

*Sterile Solution, 300 mg. per ml.*—2 and 10 ml. vials and 2 ml. syringe.

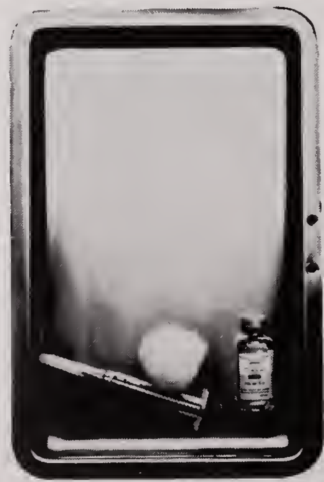
*Syrup, 250 mg. per 5 ml.*—60 ml. and pin bottles.

*For additional product information, con sult the package insert or see your Upjoh representative.*

JA71-1203 MED B-5-SR (KZL-6

The Upjohn Company
Kalamazoo
Michigan 49001

**Upjohn**



The concert was just underway,
When to the conductor's dismay
Cramps and diarrhea,
Did so quickly appear,
The maestro no longer could stay.

Because diarrhea with cramping, nausea, and painful straining can strike at the most inopportune time, it takes a comprehensive agent to treat the total diarrheal syndrome and help get the patient back on the job. That's why so many physicians rely on Donnagel, especially during the fall and winter months when "flu" and viral gastroenteritis usually hit their peak.

Schubert's Unfinished Symphony
nnagel

Donnagel is much more than just a simple kaolin-pectin combination. It also contains the belladonna alkaloids to calm GI hypermotility and help relieve the distressing discomforts which so often accompany diarrhea. Certainly it's less expensive and more convenient than taking two medications. And the dosage is lower too. Available in the handy 4-oz. plastic bottle at pharmacies everywhere on your prescription or recommendation.

When diarrhea and its discomforts separate a man from his job . . .

# Donnagel®

Each fluid ounce contains: Kaolin, 6 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Sodium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

A·H·ROBINS

A. H. Robins Company,
1407 Cummings Drive,
Richmond, Va. 23220

Coughs are back...
Robitussin
Robitussin A-C
Robitussin-DM
Robitussin-PE
4 FL OZ.
Cough Ca

# clear the tract with the

# Robitussin® Line

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

*For coughs of colds and "flu"*

**Robitussin®**

Each 5 cc. contains:

| | |
|---|---|
| Glyceryl guaiacolate | 100.0 mg. |
| Alcohol, 3.5% | |

*For unproductive allergic coughs*

**Robitussin A-C®**

Each 5 cc. contains:

| | |
|---|---|
| Glyceryl guaiacolate | 100.0 mg. |
| Pheniramine maleate | 7.5 mg. |
| Codeine phosphate | 10.0 mg. |
| (warning: may be habit forming) | |
| Alcohol, 3.5% | |

*Non-narcotic for 6-8 hr. cough control*

**Robitussin-DM®**

Each 5 cc. contains:

| | |
|---|---|
| Glyceryl guaiacolate | 100.0 mg. |
| Dextromethorphan hydrobromide | 15.0 mg. |
| Alcohol, 1.4% | |

*Clears sinuses and nasal stuffiness as it relieves cough*

**Robitussin-PE®**

Each 5 cc. contains:

| | |
|---|---|
| Glyceryl guaiacolate | 100.0 mg. |
| Phenylephrine hydrochloride | 10.0 mg. |
| Alcohol, 1.4% | |

*Robitussin-DM in solid form for "coughs on the go"*

**Cough Calmers®**

Each Cough Calmer contains:

| | |
|---|---|
| Glyceryl guaiacolate | 50.0 mg. |
| Dextromethorphan hydrobromide | 7.5 mg. |

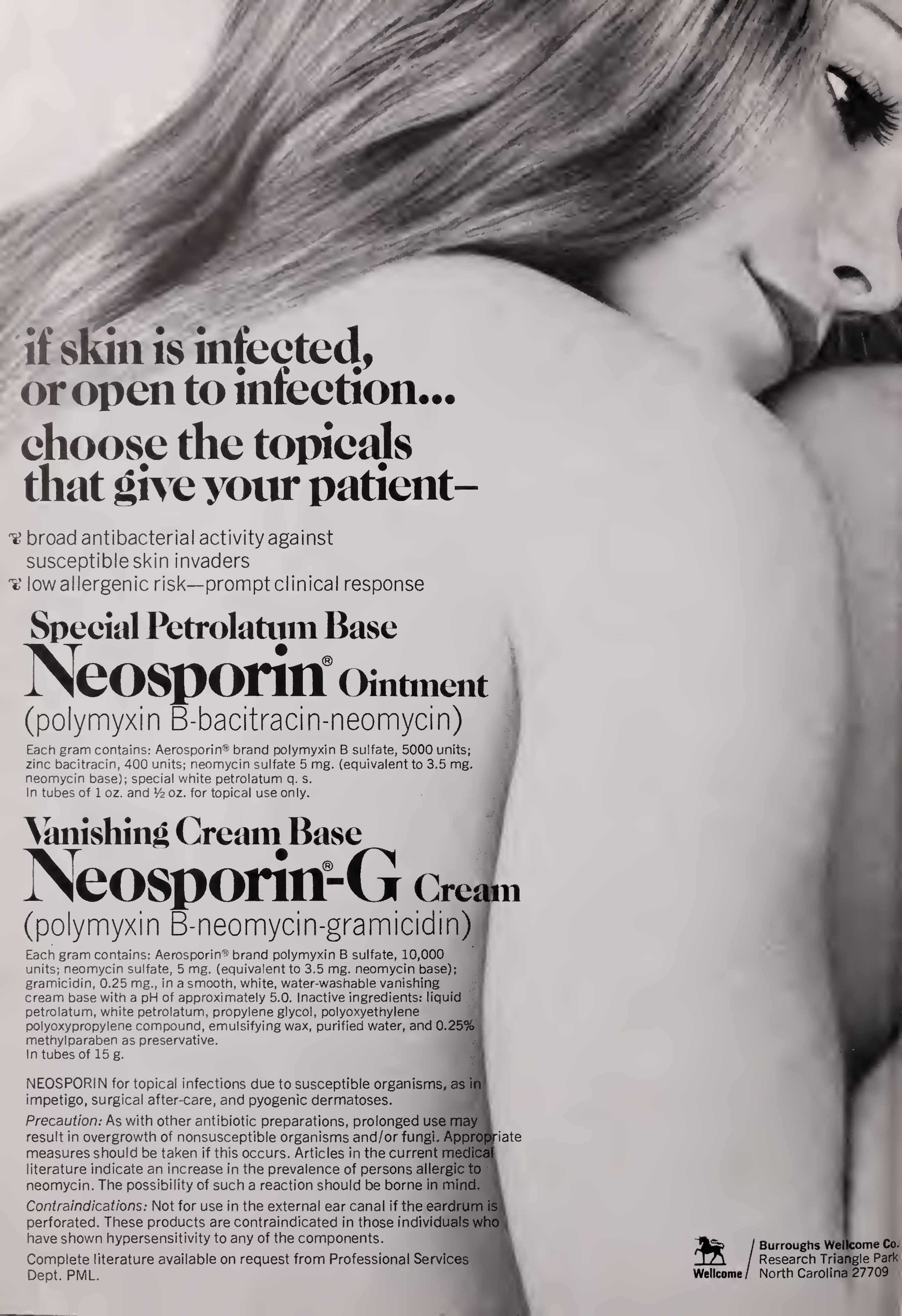
Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:

**Robitussin® extra benefit chart**

All 5 Robitussins have an EXPECTORANT-DEMULCENT action. Keep this handy chart as a guide in selecting the formula that provides the *extra* benefits you want for your patient.

| | Cough Suppressant | Antihistamine | Long-Acting (6-8 hours) | Nasal, Sinus Decongestant | Non-Narcotic |
|---|---|---|---|---|---|
| **ROBITUSSIN®** | | | | | ● |
| **ROBITUSSIN A-C®** | ● | ● | | | |
| **ROBITUSSIN-DM®** | ● | | ● | | ● |
| **ROBITUSSIN-PE®** | | | | ● | ● |
| **COUGH CALMERS®** | ■ | | ■ | | ■ |

A. H. Robins Company, Richmond, Va. 23220 A-H-ROBINS



# if skin is infected, or open to infection...

# choose the topicals that give your patient–

- broad antibacterial activity against susceptible skin invaders
- low allergenic risk—prompt clinical response

## Special Petrolatum Base
## Neosporin® Ointment
## (polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 5000 units; zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

## Vanishing Cream Base
## Neosporin®-G Cream
## (polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

*Precaution:* As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

*Contraindications:* Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.

Wellcome

**Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

# ►D.C. HEALTH NOTES

## Language Development Program

The first commencement exercises of the Language Development Program of the Children and Youth Project of the Community Health Services Administration, Department of Human Resources, was conducted recently in the Health Center for Mothers and Children, 4130 Hunt Place, N.E.

This unique program included 12 pre-school age children who constituted the first graduating class. The graduates were clad in white caps and gowns. They were enrolled in the school in January 1971 when the program was inaugurated. The children entered public school in September of this year.

It is amazing what these children accomplished from January to August under the leadership of Mrs. Eleanor E. Vowels, program director; Miss Stephanie Jerome, assistant program director, and the teachers from Federal City College—Johnnie Skeeter, Joette Jefferson, and Patricia Jenkins, all student clinicians. Dr. Roselyn P. Epps, Chief, Bureau of Maternal and Child Health, is the project director. For example, 8 months ago a 4-year old child refused to talk to anyone, including his parents. He cried constantly and when irritated would have an upset stomach. After the language development course, he talks with confidence and his parents are overjoyed.

The Language Development Program of the Children and Youth Project is part of the Speech and Hearing Services of the Audiology and Speech Pathology Section, Bureau of Maternal and Child Health of the Community Health Services Administration. Other Speech and Hearing services of the Health Services Administration are provided at the Handicapped and Crippled Childrens Unit at District of Columbia General Hospital and the Gales Health Clinic.

The Children and Youth Project was initiated in April 1967 with funds provided by the Children's Bureau of the Department of Health, Education and Welfare. The Project was designed to provide comprehensive pediatric care services to children of low income families who reside in a defined geographic area. Two health centers were established in Northeast Washington, Center #17 at 702 15th Street, N.E. and Center #18 at 4130 Hunt Place, N.E. Currently, speech and hearing services for pre-school children are provided at both centers.

In the Language Development Program, the children receive instruction in and exposure to activities which are geared toward expanding English language skills. Specific goals of the program are: 1) to increase vocabulary, 2) to strengthen conceptual skills, and 3) to provide repeated exposure and practice in the use of standard syntax, standard grammar and standard articulation patterns of speaking.

The program objective is to prepare the children for success in the public schools by providing an atmosphere that is conducive to understanding and to using standard English during the pre-school years. The staff feel, as do others in the field of Speech Pathology, that a basis for school success is established through the development of a good self-concept and the ability to comprehend and to produce the linquistic' forms used for teaching and communicating in the public schools. This opinion is supported by researchers in the field of education such as Carl Bereiter.

The data illustrate the relationship of language differences (often referred to as inadequacies) in children of low income areas and school failure. The data also clearly point up the pressing need for such language exposure programs so that the children can have an opportunity to hear and to use standard English. This is done in order that they may become equipped with the prevailing linguistic system used for teaching in the public schools. With such an opportunity these children will have a better chance for school success.

Presently, 28 children ranging in ages 3 to 5 years make up 4 language development classes. Classes are divided into nursery or pre-school age groups. Grouping is according to language functioning level and chronological age level.

Children are referred to the Speech and Hearing Clinic by Neighborhood Health Center staff or their parents. The child's parents are first interviewed to collect pertinent data relating to speech difficulty. The child is then given a routine screening hearing test and a battery of selected speech and language tests. The test results are then discussed with the parent, and the program is proposed.

Some of the children are found to have simple language immaturities that with time and proper language stimulation will develop into normal speech and language patterns. Some children are found to have language differences due to the use of non-standard language. Classes are also provided for children found to have a language deficit related to other problems such as emotional factors, mild mental retardation, perceptual disturbances, specific learning problems, and for children experiencing language delays due to health factors.

In most cases, language growth can be accelerated through group language-experience therapy in the classroom along with individualized attention.

Children who are deaf or severely mentally retarded are generally not considered for placement in the Language Development Program. Special therapy arrangements may be worked out on an individual basis for some of these children; they are usually referred to other public or private facilities. Classes meet on an average of twice a week. The 4-year old children in the pre-school classes meet for two hours each session. The 3-year old children in the nursery school groups meet for 1½ hours each session. In addition to group language activities many of the children are removed from the class for individualized tutoring.

Classes are taught by senior year and graduate level students from Federal City College who have completed most of their academic course work towards a degree in Speech Pathology. The teachers are supervised by Miss Rosemary Jackson who is the Supervisor of the Speech and Hearing Clinic at Federal City College. Miss Jackson serves as the liaison between Federal City College's Speech and Hearing Clinic and the Speech and Hearing Clinic of the Children and Youth Project. She spends most of her time demonstrating language lessons and directly supervising and observing the teachers' clinical work.

Presently there are 9 teachers assigned from Federal City College to the Children and Youth Speech and Hearing Clinic. As the teachers complete their work and obtain their degrees, new teachers replace them.

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*Associate Director, Department of Human Resources*

### Clinical Center Study

The cooperation of physicians is requested in the referral of patients with active and progressive eye changes of Graves' disease, regardless of thyroid status, for study and treatment by the Endocrinology Service, National Institute of Child Health and Human Development, at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Upon completion of their studies, patients will be returned to the care of the referring physician who will receive a summary of findings with recommendations for further therapy.

Physicians interested in having their patients considered for admission to these studies may write: Peter O. Kohler, M.D., or Griff T. Ross, M.D., Clinical Center, Room 10B-09 National Institutes of Health Bethesda, Maryland 20014 or Telephone: 301-496-4686.

**An Opportunity in Potomac**

If you're not the kind to accept run-of-the-mill living—if you appreciate an imaginative approach—See this home. Custom built with 100 year old bricks, specially designed to follow a hilltop crest, with a fabulous view on 6-1/3 acres, fenced. Excellent for entertaining, this residence reflects pride in distinctive home ownership. Some features—window walled spacious living room with fireplace; modern kitchen next to delightful family room with raised fireplace and Dutch oven; large panelled recreation room with fireplace adjoins 20 × 40 ft. patio with fireplace; 4 bedrms., study, 3 full and 2 half baths, double garage; 4-stall stable with large hay storage loft and tack room. Owner—call 299-9192.

**Surgical Supplies and Equipment**

*Complete Fitting Service for Ladies and Men*

**KLOMAN SURGICAL SUPPLY CO.**
**1028 19th Street, N.W.**
**Washington, D. C. 20036**

***Telephone:* 223-3444**

**KALORAMA CONVALESCENT HOME, INC.**

Licensed by the D. C. Department of Licenses and Inspections

**INSTITUTIONAL CARE**
**for the medical management of the acute stages of alcoholism.**

**2001 KALORAMA ROAD**
**at 20th Street, N.W. Adams 2-0063**

# ►D.C. MENTAL HEALTH ADMINISTRATION

## The Alcoholic Detoxification Center

Frank slowly opened his eyes forming two narrow, burning slits through which he stuporously focussed on an old red-brick wall, two garbage cans and several dark scurrying animals. He tried to raise his head but it fell heavily back against the brick of the wall against which he slumped. He heard the dull thud but felt no pain. Only the large, hollow ache behind his eyes that always seemed to be there when he was awake.

His bottle was empty again, but Frank felt sicker now. Too sick to panhandle again. Too sick for a day labor job again. Too sick to hunt up friends and borrow money again. A rat scurried across his leg and up onto the swollen hand holding the empty bottle. A feeling of revulsion and fear gripped Frank as he watched the rat sniff and lick the mouth of his own bottle while sitting on his hand. He could not move it.

That afternoon, a key turned in a lock and a heavy door was opened by a nurse. A policeman escorted Frank into the clean, well-lighted warmth of the District of Columbia's Alcoholic Detoxification Center at 6th and N Streets, N. W. He was but one of over 1300 men who enter the small, 75 bed facility each month for treatment. Over 40,000 men having been treated at the Center since it was opened in 1967 as a 17-month demonstration project funded by a $281,400 grant from the Department of Justice with matching funds from the District Government.

Initially, the facility which was built specifically for the task of detoxifying alcoholics contained 50 beds. By juggling space and equipment, plus using some areas as multi-purpose rooms, Mrs. Doris Bradley, R.N., the Center's Director, has increased the beds to 75, and still the load is too great. Patients are scheduled to stay in the Center for up to 72 hours, or a total of three days. Instead they must be discharged after an average of 1.4 days to make room for others who need immediate medical attention.

Frank is quickly screened to see whether he should be sent for emergency medical care to D. C. General Hospital. Since he is not in a state of Delirium Tremens, and has suffered no large scale injuries during his stay on the streets and in the alleys, he is cleaned up and put to bed. There he is checked by medical and/or paramedical staff every thirty minutes until he is ambulatory. Then he is transferred to another area of the Center and given a bed, a chance to wash his clothes and a curriculum of lectures on proper nutrition, and its special role in the life of the person with a problem of alcohol addiction. As if in illustration, he is given a diet high in calories, protein and nutrients—the things that his system needs most.

The staff of 30 full-time and two part-time employees dress in street clothes, which, along with the relaxed decor of the Center, de-emphasizes the institutional aspect of the Center. Most of the staff have been formerly trained to work in mental health settings which has proved invaluable in working with the special personalities of alcoholics.

A typical patient, for example, is likely to be emotionally immature or fixed at the infantile levels of personality or character development. He may show little or no guilt and little or no sense of responsibility for personal choices. He often is not practical in making plans for himself and frequently seeks immediate satisfactions while avoiding painful situations. In the Center he may appear helpless and dependent, frightened and lonely. Or he may be self-entrenched, depending only upon himself, in which case he may withdraw into himself after a period of cursing and threats to the staff; his attempt to find security through evidence of forcefulness, strength and successfully overriding staff decisions.

Medication at the Center is limited pretty much to Librium and/or Vitamins, with Beradryl given when patients have trouble sleeping.

Patients are encouraged to enter other phases of the District's alcoholic treatment and rehabilitation programs, to include extended detoxification at the District's Rehabilitation Center for Alcoholics, or follow-up treatment at one of the area out-patient centers. Female patients, meanwhile, are detoxified at the Inpatient Units of the Area A, B, and C, Community Mental Health Centers located on the grounds of D.C. General Hospital and at the Area D Community Mental Health Center located in the Dix Pavilion on the grounds of Saint Elizabeths Hospital.

What are the problems? Space. Bed space, and staff to man it. The current Center was planned to care for fewer than one-third of the number actually accommodated there each year. The number of alcoholics in the District has risen sharply since the Center was opened, and patients come in ever-increasing numbers; they come in on their own, are brought in by friends and relatives or may be escorted by police. It should be noted that police officers, finding a drunk on the street, may send or take him to his home when possible, but may not take him to a "drunk tank", due to the provisions in laws which now state that alcoholism is an illness which should be medically treated.

Other Detoxification Centers are planned and will be opened by the Mental Health Administration as soon as funding levels allow. This may take some time. No one knows when money will be made available or in what amounts. Everyone knows that men are still lying drunk on the Courthouse lawn between 4th and 5th and G Streets, N. W., among many other places, and the District's Detoxification Center is full to overflowing.

The District's current Detoxification program is very much like the Detoxification Center building itself; the bricks are all stretchers with no starchers, and placed in low profile on a solid foundation, highly functional, with necessary strength, but much too small.

ESSEX C. NOEL III, M.D.
*Director, D.C. Mental Health Administration*

---

# ►GENERAL NEWS

Catholic, Protestant and Jewish religious thinkers will join social and physical scientists and physicians in the world's first institute organized to conduct coordinated research into the ethical and scientific aspects of human reproduction and development.

The Joseph P. Kennedy Jr. Foundation has given the Georgetown University Medical Center a $1,350,000 grant to establish the **Joseph and Rose Kennedy Institute for the Study of Human Reproduction and Bioethics.** The Institute will be located in a new addition to the Children and Youth Center at Georgetown Hospital.

Unique in its purpose of combining ethics and science, the Institute will pioneer in the development of a new field of joint research which the Institute's founders have named "bioethics."

In the course of its bioethical investigations the Institute will study such complex contemporary questions as: (1) Do the parents of a Mongoloid child have the duty to keep the child alive when its life is threatened by disease? (2) Does a married couple have the right to reproduce if there is a good chance that their offspring will be defective? (3) What is the physician's obligation to keep an aged patient alive whose condition is agonizing and hopeless? (4) Who gets the use of artificial kidney machines when there are so few available and so many whose lives depend on them? (5) What are the ethical issues involved in the creation of test tube babies?

In addition to its research programs, the Kennedy Institute will establish the first comprehensive Information Center for Bioethics. The new Information Center will maintain a library and continuous survey of world literature in science and theology. Experts on the staff will provide the most current information on bioethical questions to scientists, students, clergymen, and others faced with vital decision making in this area.

The Kennedy Institute will focus on the specialty of perinatal medicine which deals with human life from before conception to the period of hospital care after birth. The Institute's facilities will be especially open to the poor and others in the Washington area who have the greatest need for such comprehensive clinical services.

With a Board of Advisors comprising some of the most distinguished scientists, theologians, and humanists from the United States and abroad, the Institute will be guided by such notables as Joshua Lederberg, Ph.D., Nobel Laureate and Professor of Genetics, Stanford University School of Medicine; The Rev. Fr. Bernard Haring, C.S.S.R., Professor of Moral Theology, the Pontifical Lateran University, Rome; Professor Jacques Monod, Nobel Laureate, and Director of the Pasteur Institute, Paris; Professor R. Paul Ramsey, Harrington Spear Paine Professor of Religion, Princeton University, America's most prominent Methodist ethicist; and Leo Joseph Cardinal Suenens of Belgium.

**Dr. Andre E. Hellegers,** Professor of Obstetrics and Gynecology at Georgetown University Medical Center, has been appointed as the **first Director of the Kennedy Institute.** A native of the Netherlands and educated in Britain, France and the United States, Dr. Hellegers has specialized in obstetrics and physiology and was an associate professor at Johns Hopkins University Medical School from 1962-1967. He served as a member of both Pope Paul's and President Johnson's Population Commissions and is past president of the Society for Gynecologic Investigation and of the Perinatal Research Society.

Describing the scope and emphasis of the new Institute Dr. Andre E. Hellegers, said: "The Institute will stress the problems of human development in the stages preceding birth. We hope through our research to understand better what causes certain disabilities, such as mental retardation, and how to prevent them. We will emphasize throughout our entire program the preventative as well as the curative aspects of medical care."

The core of ethical experts is already at work in temporary headquarters at the Kennedy Institute. Distinguished scholars who have already accepted posts as Kennedy Research Scholars are Reverend Bernard Haring, Professor of Moral Theology, Lateran University, Rome; Father Charles Curran, President, American Society of Christian Ethics; Leroy Walters, Ph.D., Mennonite Minister and ethicist; Richard McCormick, S.T.D., President of the Catholic Theological Association; Philip Schmitz, Ph.D., of Germany, a medical ethicist; and Enda McDonagh, S.T.D., one of Great Britain's outstanding ethicists. Additional Protestant and Jewish theologians and moralists will be added as appointments to the faculty of the Institute are accepted.

The **George Washington University Medical Center** has established a **low vision aid clinic** that will improve sight levels of patients with impaired vision, expand research in rehabilitation of the visually handicapped, and be a part of the training of physicians in ophthalmology.

Under the direction of Dr. Mansour Armaly, Professor and Chairman of the Department of Ophthalmology, the new low vision clinic in the Washington area is being supported in part by funds from the Foundation for the Handicapped and Elderly, Inc., and HEW's Social and Rehabilitation Services grant to GW's Research and Training Center.

Clinic help will be available to patients handicapped by impaired vision resulting from glaucoma or congenital defects where standard methods of correcting visual impairments fail.

**Dr. S. Joseph Cosimano**, was re-elected **President of the American Cancer Society, District of Columbia Divison** by the Society's Board of Trustees following the recent annual meeting of the health agency. Dr. Cosimano's second term will commence September 1, 1971.

Named as Vice Presidents by the trustees were: John J. Ahearn, LaSalle D. Leffall, Jr., M.D., and Cyril A. Schulman, M.D. Also named as officers were: Frank G. Jost, Treasurer and Hilda Wexler, Secretary. Mr. Arthur Waugh was elected President of the Division's Northeast Unit, and Calvin W. Rolark was re-elected President of the Division's Southeast Unit.

With the cooperation of the University Health Service, the **Howard University Center for Sickle Cell Anemia** is presently sponsoring a screening program for Sickle Cell Hemoglobin and Glucose 6 Phosphate Dehydrogenase (G6-P-D) Deficiency of all incoming students at Howard University. Both of these genetic disorders may affect as many as 10 percent of Blacks in the United States.

The results of the screening will become a part of each student's health record. Positive reactors will be provided with the opportunity to receive genetic counseling in the Hereditary Clinic which is operated by the Medical Genetics Unit in the Department of Pediatrics.

The screening program was made possible by cooperation of the Chief Administrator of the University Health Service and technical staff members from the Pediatric Research Laboratory, the Medical Genetics Unit, the PKU Laboratory of Freedmen's Hospital, and the Howard University College of Medicine. The screening program for sickling was carried out under the auspices of the Howard University Center for Sickle Cell Anemia.

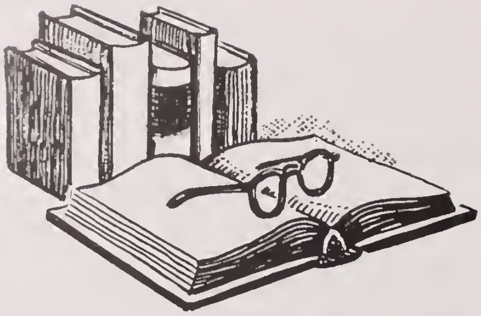
The **Georgetown University Medical Center** moved forward in computerized medicine by affiliating with a national leader and pioneer in computer technology and biomedical science.

The National Biomedical Research Foundation, installed in the Pre-Clinical Science Building at Georgetown, brings the medical center computerized assistance which can scan an x-ray, define malignant cells, predict mental retardation from chromosomes, screen the effect of drugs on chromosomes, analyze bone structures, or plan treatment for a particular condition—all within seconds.

"The nonprofit foundation," said Dr. Matthew F. McNulty, Jr., vice president for medical center affairs, "augments the medical center's capabilities with a ten-year experience in applied computer/electronic techniques in fields such as chromosome analysis, biomedical instrumentation, health science and allied areas."

**William G. Battaile, M.D.**, Chairman of the Department of Pathology at Sibley Memorial Hospital was installed as the **25th President of the American Association of Blood Banks** at its Annual Meeting in Chicago, September 15. Dr. Battaile, who is also a member of the Board of Directors of the Washington Medical Center, is a graduate of both Catholic and Georgetown Universities, and completed his residency training at Doctors Hospital here, as well as the Mayo Clinic in Rochester, Minnesota.

Active in local, state, and nation medical organizations, Dr. Battaile is President of the Sibley Medical Association.



# Book Reviews

**Hypertrophic Obstructive Cardiomyopathy.** Ciba Foundation Study Group No. 37. G. E. WOLSTENHOLME AND MAEVE O'CONNER, editors. Pp. 220 with illustrations. London: Churchill, 1971.

For Internists, Cardiologists, Cardiac Surgeons and House Officers this small pocket size volume probably represents the most recent, comprehensive review of Hypertrophic Obstructive Cardiomyopathy (called Idiopathic Hypertrophic Subaortic Stenosis in this country) available in a single publication. It is a collection of fifteen papers and five discussions presented in London, England on September 4, 1970, under the auspices of the Ciba Foundation.

The papers are divided into groups separated by recorded discussions. The first group is primarily a clinical review. This is followed by groups of papers on familial incidence, electromyography, pathophysiology, auscultatory phenomena, medical and surgical treatment and finally, discussions of pathology and histochemistry.

The combination of the first three clinical discussions and the paper from Schrire and Voglepoel's group in South Africa reviewing the auscultatory diagnostic manipulations are in themselves worth the price of the book.

Medical and Surgical treatments are covered adequately. From these chapters particularly one quickly appreciates the unanswered questions and controversies that remain.

Technically, the binding, printing and illustrations are good. The index is entirely adequate. Following each paper the individual bibliographies vary from only pertinent references to moderately extensive reviews. The index is adequate.

This excellent little book can be enthusiastically recommended to all physicians interested in this entity. It should be in all hospital and medical school libraries. All Cardiologists, Internists, and House Officers would profit from the reading and rereading of the superb paper on the auscultatory phenomena.

STANLEY M. SILVERBERG, M.D.

**The Hand.** LEE MILFORD, M.D. Price, $19.50. Pp. 282 with 308 illustrations and 1 color plate. St. Louis: C.V. Mosby Company, 1971.

Because of the interest generated by Dr. Milford's chapter on hand surgery in the fourth edition of Campbell's Operative Orthopedics, this chapter from the new, fifth edition has been published as a separate volume. Evaluation of this book, however, must be undertaken with the realization that it has been intended as a treatise on surgical care of the hand and not as a comprehensive approach to the hand as the title implies. It is assumed that the reader has thorough knowledge of the anatomy, kinesiology, and rehabilitation of the hand, which have been well covered in several texts.

The general format is essentially the same as in the previous edition. A new section on special hand injuries such as various burns, frostbite, grease and paint-gun injuries, shotgun, and wringer injuries has been added. The section on amputations has been taken from the general chapter on all amputations and inserted here for completeness. Other sections have been brought up to date and the bibliography expanded. Of particular note is the detailed discussion of the various thumb reconstruction procedures and the greatly expanded section on the rheumatoid hand. The illustrations are of good quality and sufficient in number to supplement the discussions.

The section on the rheumatoid hand was marred by the total neglect of the subject of prosthetic joint replacements. Although it has been covered in articles by Flatt, Swanson, Neibauer and others, prostheses have been generating considerable interest for several years and a thorough discussion was clearly indicated. The subject of paint-gun and grease-gun injuries could also have been expanded to emphasize the devastating effects of these injuries and the need for extensive exposure in their management.

With those few exceptions, Dr. Milford has produced a chapter and a volume which will again prove a valuable asset to all surgeons whose work brings them into the field of hand surgery.

R. MARSHALL ACKERMAN, M.D.

**Complete professional liability (Malpractice)* and Personal Insurance for the Doctor.**

Employees Workmen's Compensation
Bonds on Employees
Equipment Floater
Fire Insurance Contents
Business Expense Disability
Non-Cancellable Disability Income
Auto and Home Insurance

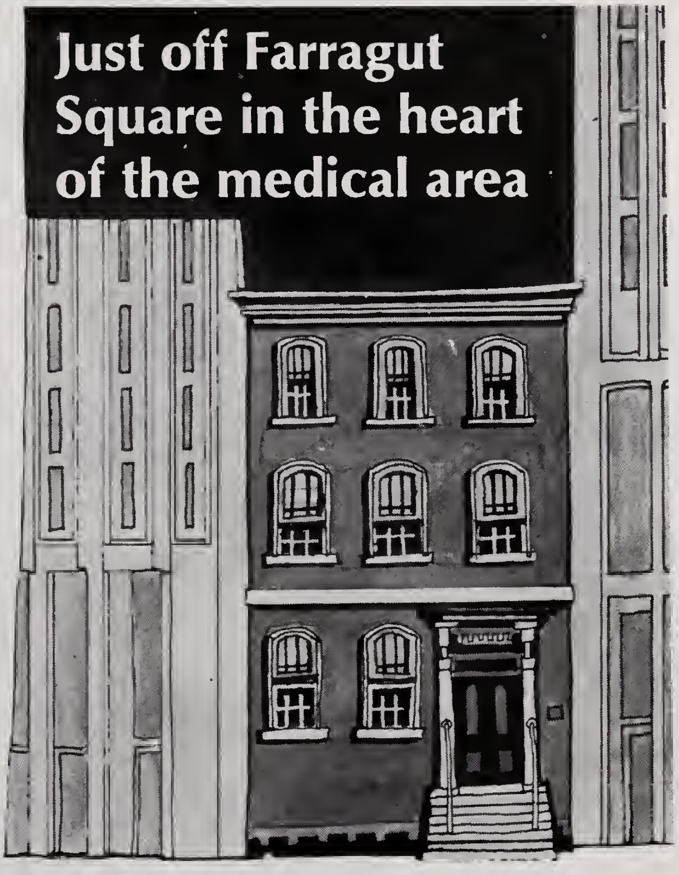
**As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*


Just off Farragut Square in the heart of the medical area

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

**NURSES REGISTRY**

LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**

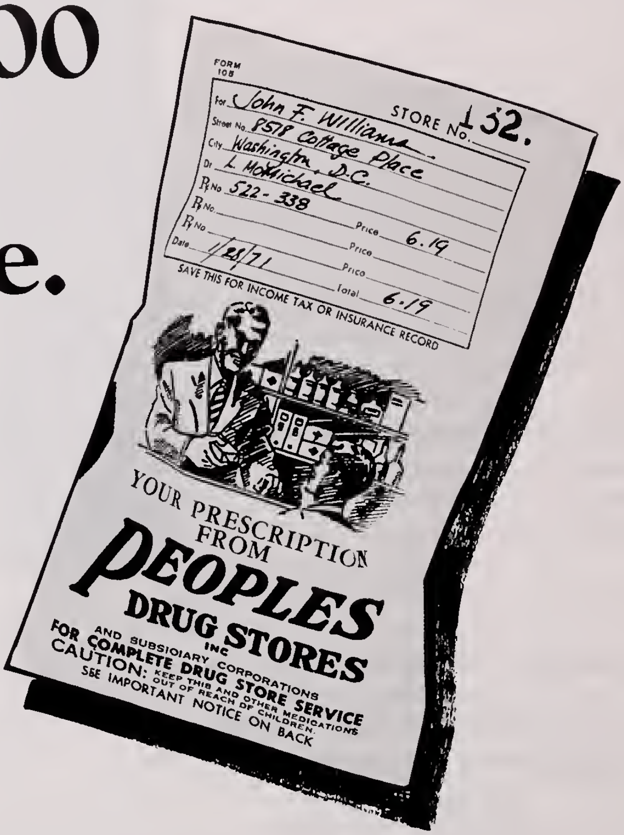
Ef-
fic-
iency

**Dicarbosil®**
ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

# The bag that has earned more than 125,000,000 votes of confidence.



FORM 108

For John F. Williams STORE No. 132.
Street No. 8518 Cottage Place
City Washington, D.C.
Dr L McMichael
℞ No 522-338
℞ No. Price 6.19
℞ No Price
Date 1/28/71 Price
Total 6.19

SAVE THIS FOR INCOME TAX OR INSURANCE RECORD

YOUR PRESCRIPTION FROM PEOPLES DRUG STORES INC AND SUBSIDIARY CORPORATIONS

FOR COMPLETE DRUG STORE SERVICE

CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN.

SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

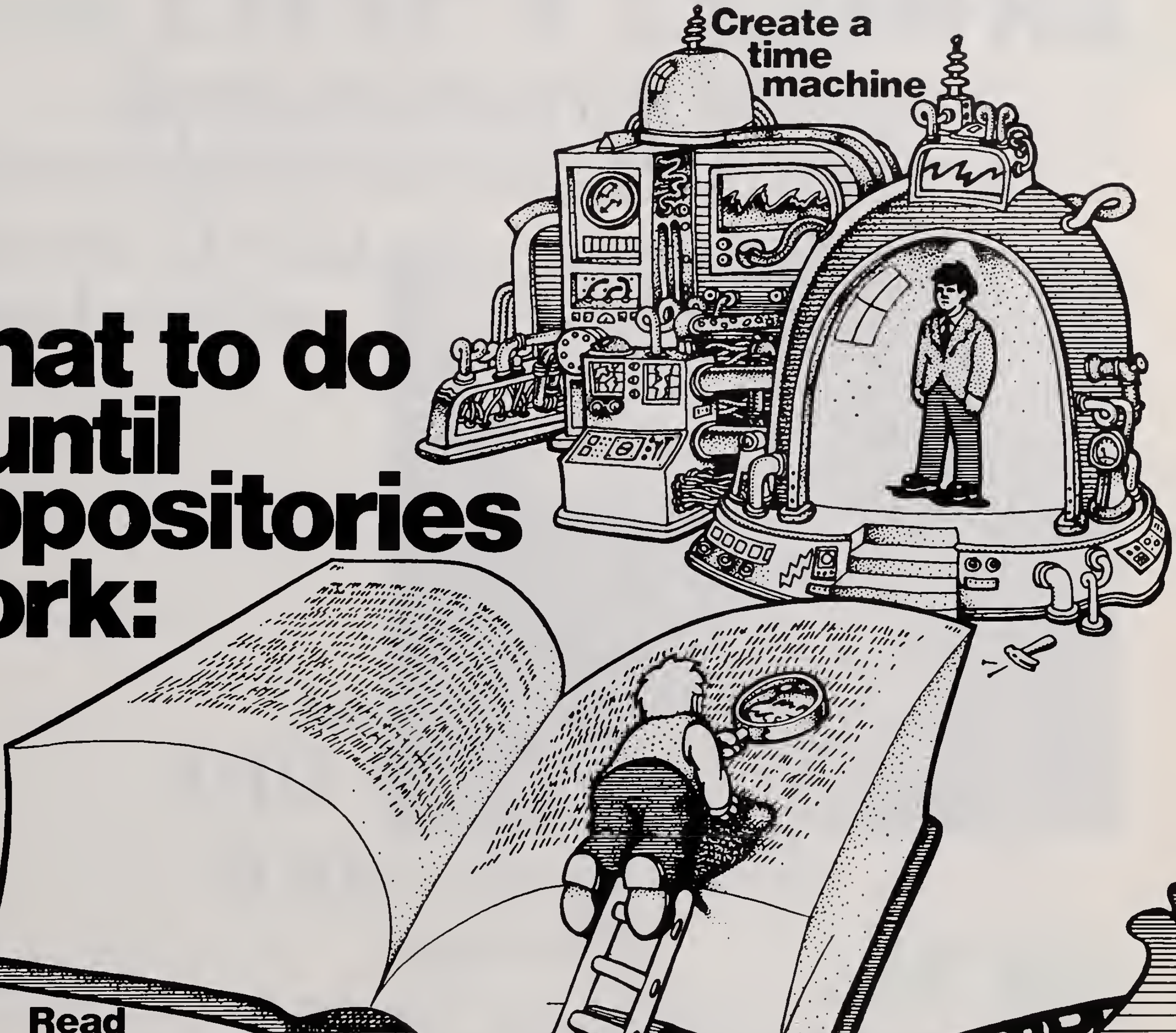
**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®

PRESCRIPTION DRUG STORES

**WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.**



**What to do until suppositories work:**

Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: Fleet® Enema.

Fleet Enema works within 2 to 5 minutes without pain or spasm. Fleet Enema induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. Fleet Enema avoids the irritation common with soapsuds enema. And Fleet Enema is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

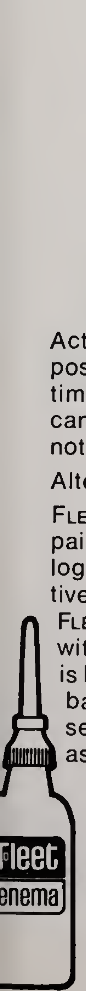
Fleet Enema. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

Fleet pharmaceuticals

C. B. FLEET CO., INC.
Lynchburg, Va. 24505

**Warning:** Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present. **Caution:** Do not administer to children under two years of age unless directed by a physician.

**References:** 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.



# now...

for the stable adult diabetic who needs higher doses of a reliable oral hypoglycemic...

# new DBI®-TD 100 mg.

## (phenformin HCl)

timed-disintegration capsules

- a higher dosage strength for use in the overweight, maturity-onset diabetic if diet alone fails
- a biguanide . . . not a sulfonylurea
- new dosage flexibility
- low patient cost

# new DBI®-TD 100 mg.

## (phenformin HCl)

timed-disintegration capsules

## lowers elevated blood sugar

Secondary to its blood sugar lowering effect, DBI-TD probably decreases insulin oversecretion and thus may help reduce lipogenesis and facilitate lipolysis. This may account for the clinically reported reduction in weight and lowering of serum cholesterol levels in the overweight and hypercholesteremic diabetic patient.

## usually well tolerated

Mainly gastrointestinal side effects may occur. However, as with many drugs, you should keep in mind that higher dosages may increase the incidence. Hypoglycemic reactions are rare when DBI-TD is used alone.

## to prescribe DBI®-TD (phenformin HCl) if diet alone fails specify

**DBI-TD 50 mg.** for the newly diagnosed overweight, stable adult diabetic
**DBI-TD 100 mg.** for the overweight, adult-onset diabetic who needs higher doses of a reliable oral hypoglycemic

**Indications:** Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary. **Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes that is uncomplicated and well regulated on insulin; acute complications of diabetes (metabolic acidosis, coma, infection, gangrene); surgery; severe hepatic disease; renal disease with uremia; cardiovascular collapse, after disease states associated with hypoxemia. **Warning:** Use during pregnancy is to be avoided. Until adequate data on the effects of DBI on the human fetus are available, such use can be considered experimental. **Precautions: Starvation Ketosis,** which must be differentiated from "insulin lack" ketosis, and is characterized by ketonuria in spite of relatively normal blood and urine sugar, may result from excessive DBI therapy, excessive insulin reduction or insufficient carbohydrate intake. Adjustment of DBI-TD or insulin dosage, or supplying carbohydrates, alleviates this state. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING BLOOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period, particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 25 mg.-300 mg. daily. **How Supplied:** 50 mg. timed-disintegration capsules, bottles of 100 and 1000; 100 mg. timed-disintegration capsules, bottles of 100 and 500. **Also Available:** DBI tablets 25 mg., bottles of 100 and 1000.

**USV PHARMACEUTICAL CORP., Tuckahoe, New York 10707**

USV

**Versapen®**
(hetacillin)

Once in the patient's body, it rapidly hydrolyzes into ampicillin.

IS
IT
JUST AN
AMPICILLIN?

# Extensive clinical experience has shown that this ampicillin derivative offers unique advantages over the ampicillin you may be presently prescribing:

**1/ A uniform adult and a uniform pediatric dosage in all mild-to-moderate infections due to susceptible organisms—respiratory, genitourinary, G.I., skin and soft tissue.**

Adults: 225 mg. q.i.d.

Children: 10 mg./lb./day in 4 equally divided doses.

The recommended dosage for Versapen (hetacillin) does not depend on site of infection, but on severity. Therefore, in mild-to-moderate infections due to susceptible organisms, you can prescribe Versapen (hetacillin) for the genitourinary tract at the same dose recommended for the respiratory tract. Or any other infection site.

**2/ A low dosage for mild-to-moderate genitourinary infections** due to susceptible organisms.

**3/ A low dosage for mild-to-moderate pediatric infections** due to susceptible organisms.

**4/ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin.**

**5/ Lower patient cost.** Inherent with lower dosages for many indications is the benefit of lower cost to the patient. And, in these many instances, Versapen is significantly more economical to the patient than ampicillin brands.

**Side Effects.** As with any penicillin serious allergic reactions, including anaphylaxis, can occur. The type of side effects most frequently encountered are the same as with ampicillin, namely: diarrhea, loose stools, rash and nausea.

Please see next page for brief summary of prescribing information.

BRISTOL

# Versapen® (hetacillin)
# Versapen®-K (potassium hetacillin)

■ Versatile dosage forms...for all patients...of all ages. ■ A uniform adult and a uniform pediatric dosage for all susceptible mild-to-moderate infections...respiratory, genitourinary, G.I., skin and soft tissue. Recommended dosage varies with severity, not site, of infection. ■ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin. ■ Economical therapy.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
(A) 12/28/70
For complete information, consult Official Package Circular.

**Actions:** Hetacillin provides bactericidal levels of ampicillin but has no antibacterial activity itself. It hydrolyzes to ampicillin and has a half-life of 20 minutes at pH 7.1.

**Indications:** Hetacillin is indicated in the treatment of susceptible strains of the following organisms in the diseases listed. Bacteriology studies to determine the causative organisms and their sensitivity should be performed. Therapy may be instituted prior to obtaining results of sensitivity testing.

Group A beta-hemolytic Streptococcus: Tonsillitis, pharyngitis, otitis media, skin and soft tissue infections.

*Diplococcus pneumoniae:* Broncho- and lobar pneumonia, otitis media.

Nonpenicillinase-producing *Staphylococcus aureus:* skin and soft tissue infections, otitis media.

*H. influenzae:* Bronchitis and bronchopneumonia.

*Escherichia coli:* Cystitis, pyelonephritis, prostatitis/urethritis, skin and soft tissue infections.

*Proteus mirabilis:* Cystitis, pyelonephritis, skin and soft tissue infections.

Enterococcus (*Streptococcus faecalis*): Cystitis, pyelonephritis, prostatitis/urethritis.

Shigella species: Shigellosis.

Salmonella species: Salmonellosis (parenteral only).

Indicated surgical procedures should be performed.

Use parenteral drug only in severe infections or in patients unable to take oral medications.

**Contraindications:** A history of allergic reactions to penicillins or lidocaine.

**Warning:** Anaphylaxis may occur, particularly after parenteral administration and especially in patients with an allergic diathesis. Check for a history of allergy to penicillins, cephalosporins or other allergens. If an allergic or anaphylactic reaction occurs, discontinue hetacillin and institute appropriate treatment.

*Usage in Pregnancy:* Safety for use in pregnancy is not established.

**Precautions:** Mycotic or bacterial superinfections may occur. Assess renal, hepatic and hematopoietic function periodically during long-term therapy. Because intravenous administration of potassium hetacillin in doses in excess of 5 mg./Kg. has been noted to enhance the vasopressor effect of epinephrine in dogs, precautions should be taken with patients receiving epinephrine concurrently.

**Adverse Reactions:** Untoward reactions include: Glossitis, stomatitis, black "hairy" tongue, nausea, vomiting and diarrhea, skin rashes, urticaria, exfoliative dermatitis, erythema multiforme and anaphylaxis (usually with parenteral administration). Anemia, thrombocytopenia, thrombocytopenic purpura, eosinophilia, leukopenia, and agranulocytosis have been noted, are usually reversible and are believed to be hypersensitivity phenomena.

Elevations in one or more liver function tests have been reported without any evidence of hepatic toxicity.

Local reactions: Thrombophlebitis at the site of intravenous injection has been reported.

**Usual Dosage:** Patients weighing 90 lbs. or more: 225 mg. q.i.d. Patients weighing less than 90 lbs.: 2.5 mg./lb. q.i.d.

Group A beta-hemolytic streptococcal infections should be treated for at least 10 days. Administer oral preparations in a fasting state to insure maximum absorption.

**Recommended dosages (expressed in terms of ampicillin activity) in susceptible mild-to-moderate infections***

| | | |
|---|---|---|
| **Versapen®** (hetacillin)<br>**112.5 mg.** | Chewable Tablets | *Usual pediatric dosage:* 10 mg./lb./day in 4 equally divided doses.<br>For a 45 lb. child: one tablet *q.i.d.* |
| | Oral Suspension (112.5 mg./5 ml.) | *Usual pediatric dosage:* 10 mg./lb./day in 4 equally divided doses.<br>For a 45 lb. child: 1 tsp. *q.i.d.*<br>Available in 40 ml., 80 ml., and new 100 ml. bottles. |
| | Pediatric Drops (112.5 mg./ml.) | *Usual dosage:* 10 mg./lb./day in 4 equally divided doses.<br>For a 10 lb. child: ¼ dropper *q.i.d.*<br>Available in 10 ml. bottles. |
| **Versapen®-K** (potassium hetacillin)<br>**225 mg.** | Capsules | *Usual adult dosage:* one 225 mg. capsule *q.i.d.* |
| | I.V.<br>I.M. with Lidocaine HCl (20 mg./vial) | *For patients weighing 90 lbs. or more:* 225 mg. *q.i.d.*<br>*For patients weighing less than 90 lbs.:* 10 mg./lb./day in 4 equally divided doses. |

*For severe infections—Adults: 450 mg. *q.i.d.* Children up to 90 lbs.: 20 mg./lb./day in 4 equally divided doses.
Very serious infections may require very high doses and prolonged therapy. *Note:* Versapen® has been issued Patent No. 3198804

**BRISTOL** BRISTOL LABORATORIES/Division of Bristol-Myers Company/Syracuse, New York 13201

# You can't fell a redwood with a hatchet

**With vitamins, too, relative needs determine the choice.**

A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a *high potency formula* will do.

THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.

**Theragran®**

**High Potency Vitamin Formula**

**Theragran®-M**

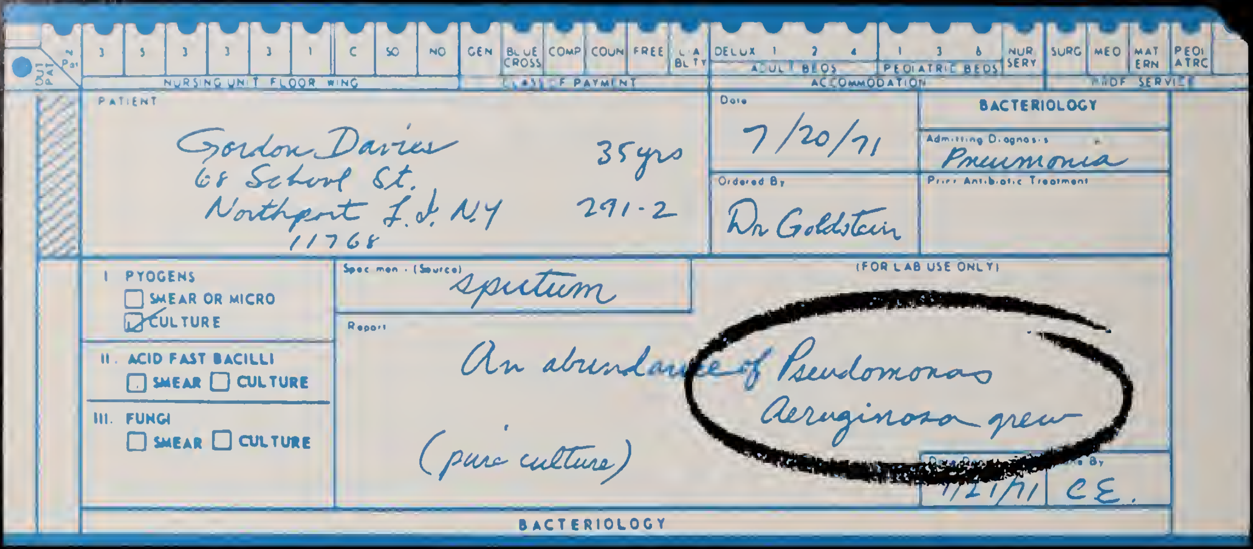
**High Potency Vitamin Formula with Minerals**

THERAGRAN TABLETS AND LIQUID CONTAIN 600% OF THE MINIMUM DAILY ADULT REQUIREMENT OF VITAMIN C.

**SQUIBB**

"The Priceless Ingredient of every product is the honor and integrity of its maker."™

© E.R. Squibb & Sons, Inc. 1970



OUT PAT Pat
3 5 3 3 3 1 C SO NO
NURSING UNIT FLOOR WING
GEN BLUE CROSS COMP COUN FREE LIA BLTY
CLASS OF PAYMENT
DELUX 1 2 4
ADULT BEDS
1 3 6
PEDIATRIC BEDS
NURSERY
ACCOMMODATION
SURG MED MATERN PEDIATRC
PROF SERVICE

PATIENT
Gordon Davies 35 yrs
68 School St.
Northport L.I. N.Y 291-2
11768

Date 7/20/71

BACTERIOLOGY

Admitting Diagnosis Pneumonia

Ordered By Dr Goldstein

Prior Antibiotic Treatment

I PYOGENS
☐ SMEAR OR MICRO
☑ CULTURE

II. ACID FAST BACILLI
☐ SMEAR ☐ CULTURE

III. FUNGI
☐ SMEAR ☐ CULTURE

Specimen - (Source) sputum

(FOR LAB USE ONLY)

Report
An abundance of Pseudomonas
Aeruginosa grew
(pure culture)

7/21/71 CE.

BACTERIOLOGY

# the choice is clear:

# Pyopen®

(sterile disodium carbenicillin)

A serious infection... Pseudomonas, confirmed by pure culture. Fortunately, the strain proves sensitive to carbenicillin and the patient is not allergic to penicillins. The choice is clear: Pyopen.

Unlike other antibiotics currently available for the treatment of Gram-negative sepsis, there are no reports of nephrotoxicity or ototoxicity with Pyopen therapy. Its effectiveness against *Ps. aeruginosa* and *Proteus* species (particulary indole-positive strains) has been amply confirmed by clinical experience and microbiologic studies.

Pyopen is a product of Beecham, the company which pioneered most of today's semisynthetic penicillins. Your Beecham-Massengill representative would like to give you proof of our dedication to the concept of Total Service.

THE TOTAL SERVICE CONCEPT: Beecham-Massengill's dedication to the concept of total service is exemplified by the Pyopen Program — offering valuable teaching-learning materials and an added measure of personal attention: *Gram-Negative Sepsis,* a multimedia presentation by leading American medical authorities...*A Profile of Pseudomonas,* a monograph for the clinical microbiologist... *24-hour consultation service* in matters relating to carbenicillin (phone: 201-778-9000)... *emergency supply,* a novel plan for assuring the continual availability of Pyopen to hospitals specifying this brand of carbenicillin.

For additional information about the Beecham-Massengill Total Service Concept see our representative or write to us directly.

BEECHAM-MASSENGILL PHARMACEUTICALS
Div. of Beecham Inc.
Bristol, Tennessee 37620

**PRESCRIBING INFORMATION** **Indications:** Primarily for treatment of infections due to susceptible strains of *Pseudomonas aeruginosa, Proteus* species (particularly indole-positive strains), and certain *Escherichia coli.* Clinical effectiveness has been demonstrated in the following infections when due to these organisms: Urinary tract infections; severe systemic infections and septicemia; acute and chronic respiratory infections (while clinical improvement has been shown, bacteriologic cures cannot be expected in patients with chronic respiratory disease and cystic fibrosis); soft tissue infections. Although PYOPEN (disodium carbenicillin) is indicated primarily in Gram-negative infections, its activity against Gram-positive organisms should be kept in mind when both Gram-positive and Gram-negative organisms are isolated (see Actions). **Note:** During therapy, sensitivity testing should be repeated frequently to detect the possible emergence of resistant organisms. **Actions:** Organisms found to be susceptible *in vitro* include: Gram-Negative Organisms-*Ps. aeruginosa, Proteus mirabilis, Pr. morganii, Pr. rettgeri, Pr. vulgaris, E. coli, Enterobacter* species, *Salmonella* species, *Hemophilus influenzae*, and *Neisseria* species. Gram-Positive Organisms-*Staphylococcus aureus* (nonpenicillinase-producing), *Staph. albus, Diplococcus pneumoniae,* Beta-hemolytic streptococci, and *Streptococcus faecalis.* Some newly emerging pathogenic strains of *Herellea, Mima, Citrobacter,* and *Serratia* have also shown *in vitro* susceptibility. Not stable in the presence of penicillinase. *Klebsiella* species are resistant. Some strains of *Pseudomonas* have developed resistance fairly rapidly. **Contraindications:** Known penicillin allergy. **Warnings:** Serious and occasional fatal hypersensitivity (anaphylactic) reactions have been reported in patients on penicillin therapy. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens. There have been reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, appropriate therapy should be instituted and discontinuance of disodium carbenicillin therapy considered, unless the infection is life threatening and only amenable to disodium carbenicillin therapy. The usual agents (antihistamines, pressor amines, and corticosteroids) should be readily available. **Usage in Pregnancy:** Safety for use in pregnancy has not been established. **Precautions:** As with any other potent agent, it is advisable to check periodically for organ-system dysfunction, including renal, hepatic, and hematopoietic systems, during prolonged therapy. Emergence of resistant organisms, such as *Klebsiella* species and *Serratia* species, which may cause superinfection, should be kept in mind. Each gram contains 4.7 mEq sodium; in patients where sodium restriction is necessary, such as cardiac patients, periodic electrolyte determinations and monitoring of cardiac status should be made. Observe patients with renal impairment for bleeding manifestations and adhere strictly to dosage recommendations. If bleeding manifestations appear, discontinue antibiotic and institute appropriate therapy. As with any penicillin preparation, the possibility of an allergic response, including anaphylaxis, may occur, particularly in a hypersensitive individual. **Administration:** Intramuscular injections should be made well within the body of a relatively large muscle (not into the lower and mid-third of the upper arm), and aspiration is necessary to help avoid inadvertent injection into a blood vessel. May be given by either intravenous injection or intravenous infusion. After reconstitution with Sterile Water for Injection unused portions should be discarded after 24 hours if stored at room temperature, or after 72 hours if refrigerated. **Adverse Reactions:** *Hypersensitivity Reactions*—Skin rashes, eosinophilia, pruritus, urticaria, drug fever, and anaphylactic reactions. *Gastrointestinal Disturbances*—Nausea. *Hemic and Lymphatic Systems*—Hemolytic anemia, thrombocytopenia, leukopenia, neutropenia, in uremic patients receiving high doses (24 gm/day), hemorrhagic manifestations associated with abnormalities of coagulation tests, such as clotting and prothrombin time. *Hepatic and Renal Studies*—SGOT and SGPT elevations have been observed, particularly in children. To date, no clinical manifestations of renal disorders have been demonstrated. *Central Nervous System*—Convulsions or neuromuscular irritability could occur with excessively high serum levels. *Local Reactions*—Pain at the site of injection, sometimes accompanied by induration. Vein Irritation and Thrombophlebitis—particularly when undiluted solution is injected directly into the vein. **How Supplied:** Available in 1 Gm. and 5 Gm. vials.

*Before prescribing or administering, see package circular or PDR.*

DARVON®
COMPOUND-65
65 mg. propoxyphene hydrochloride, 227 mg.
aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine
Lilly H06

Additional information available to the profession on request.
**Eli Lilly and Company • Indianapolis, Indiana 46206**

Lilly

101488

**IN ASTHMA**
**IN EMPHYSEMA**

*optional therapy*

**THE mudranes®**

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinaations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrinecombinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

**MUDRANE—original formula**
*First choice*

**MUDRANE-2**
*When ephedrine is too exciting or is contraindicated*

**MUDRANE GG**
*During pregnancy or when K.I. is contraindicated or not tolerated*

**MUDRANE GG-2**
*A counterpart for Mudrane-2*

**MUDRANE GG ELIXIR**
*For pediatric use or where liquids are preferred*

*Clinical specimens available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217
*Manufacturers of Ethical Pharmaceuticals*

**HEALTH AUTO-DATA, INC.**
4900 Massachusetts Avenue, N.W.
Washington, D.C. 20016
(202) 966–4300

*Serving the Physician*
*and the Community*

Health Auto-Data, Inc. (HAD), is organized to provide services to physicians to assist them in their daily routines.

Overhead cost may be reduced by having routine work done at the HAD facility.

We prepare a "patient profile" which may save a considerable amount of time. By having selected tests performed and a medical history taken prior to the physician's initial consultation with the patient, the physician finds it easier and less time-consuming to review the patient's history and analyze the test results.

The medical history is self-administered by patients utilizing an automated console. It passively teaches the patient how to report to a physician, again resulting in a time saving for the physician.

Several semi-automated physiological and laboratory tests are performed.

The entire patient-testing procedure only lasts about an hour and a half! HAD does not interpret the tests. HAD concentrates on the efficient and low-cost performance of routine tests.

The computer-printed reports - - with annotations by the patient's physician - - can serve as records to enclose when making referrals. The records with added diagnosis and recommendations can provide a full report when admitting a patient to a hospital. With progress notes regarding hospital treatment and disposition, the material provides the basis for a hospital summary.

Appointments for patients may be made at the patients' convenience. Call 966–4300 for further information or clip out this form and mail to:

HEALTH AUTO–DATA, INC.
4900 MASSACHUSETTS AVENUE, N.W.
WASHINGTON, D.C. 20016

FROM: DR. ______________________________

STREET ADDRESS ______________________________

CITY ____________________ STATE ________

ZIP CODE ____________________

TELEPHONE NUMBER ____________________

☐ SEND LISTING OF SERVICES AND FEES

☐ HAVE A REPRESENTATIVE CALL FOR APPOINTMENT TO EXPLAIN SERVICES

☐ I AM INTERESTED IN A FIRST-HAND INSPECTION OF HAD - - CALL ME TO ARRANGE A VISIT

☐ I AM INTERESTED IN BEING PROCESSED THROUGH HAD FACILITY - - CALL ME TO ARRANGE AN APPOINTMENT SO I CAN INCLUDE YOUR SERIES OF TESTS IN MY ANNUAL PHYSICAL EXAMINATION. I UNDERSTAND THIS IS COMPLIMENTARY

# Empirin® Compound with Codeine, gr. ½ or gr. 1

# Helps overpower pain

Each tablet contains: aspirin gr. 3½,
phenacetin gr. 2½, caffeine gr. ½.
No. 3 contains codeine phosphate* (32.4 mg.) gr. ½.
No. 4 contains codeine phosphate* (64.8 mg.) gr. 1.
(Warning—may be habit forming.)

C III Empirin Compound with Codeine is now classified in Schedule III.
Available on oral prescription and may be refilled 5 times
within 6 months, unless restricted by State law.

Complete literature available on request from Professional Services Dept. PML.

Wellcome

**Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

in cardiac edema

Trademark

Dyazide®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

gets the water out

spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR.*

**Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

**Contraindications:** Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

**Warnings:** **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

**Precautions:** Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

**Supplied:** Bottles of 100 capsules.

SK&F

SK&F Co., Carolina, P.R. 00630
a subsidiary of Smith Kline & French Laboratories

# CLASSIFIED ADVERTISEMENTS

**Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.**

***Classified advertisements of a professional nature are free to members.***

## OFFICE SPACE AVAILABLE

PHYSICIAN RETIRING from active practice of Internal Medicine. Have 2½ years to run on current lease. Would like to sublet for that period with possibility of taking up 5 year option thereafter. Suite consists of about 900 sq. ft., including nurses office, waiting rooms, consultation room and 3 examining rooms. Kindly contact Harold L. Hirsh, M.D., 2000 N St., N.W. Suite 111, Washington, D.C. 20036, Phone (202) 223-5000.

FOR SALE OR LEASE: Fully equipped modern medical laboratory, including some automated equipment. Ideal location, over 200 doctors within a 5 block radius. Established over 20 years. Ideal for group of physicians or pathologist. Laboratory already licensed by State by Maryland. All technical help will stay if desired. Building can also be purchased, which has 2000 sq. ft. of laboratory space. Owner retiring. Box No. 25, Medical Annals of D.C., 2007 Eye St., N.W., Washington, D.C. 20006.

CHEVY CHASE MEDICAL BUILDING—Office for rent. Available immediately. Air-conditioned, elevator service, cleaning service, water facilities and utilities included. Partitioning and parking available. $4.50 per sq. ft. (301) 882-6800.

FOR RENT: Office, supplies, equipment, and medical staff services provided in completely equipped, automated testing facility. Especially suitable for Internists and General Practitioners. Desirable northwest D.C. location with ample free parking. Contact Mr. Mel Allen (202) 966-4300.

FOR RENT: 1726 Eye Street, N.W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298-6936.

FOR RENT: Office for 2 doctors, 5323 Connecticut Avenue, N.W. 3 examining rooms, 1 lab., 1 x-ray, and 1 waiting room. Contact Resident-Manager, Mr. Adams, (202) 362-7847.

## PHYSICIANS WANTED

PHYSICIANS WANTED-IMMEDIATE NEED. For permanent staff and on sessional basis at PRETERM, 1726 Eye Street, N.W., Washington, D.C. 20006. An innovative outpatient clinic for pregnancy termination, counseling and birth control. Surgical and Ob/Gyn. Call or write Benjamin N. Branch, M.D., Medical Director, (202) 298-7300.

## PRACTICE FOR SALE

GENERAL PRACTICE, established 40 years in Mt. Pleasand area, fully equipped office, X-ray, EKG, diathermy. Call Mrs. E. H. Markwood, (703) 536-7727 or write 4142 N. River Street, Arlington, Virginia 22207.

## EQUIPMENT FOR SALE

FOR SALE: 1) Green Metal Examining Table—new; 2) Green Scales-Health-O-Meter—new; and 3) Instrument Cabinet—used. Retiring from practise January 1, 1972 but available now. Call (202) 248-8476 for further details.

FOR SALE: Laboratory equipment including Bausch and Lomb binocular clinical microscope, Adams Readacrit Micro-hematocrit centrifuge, Clay-Adams centrifuge, Pelton-Crane autoclave and table. Telephone (202 296-8170.

## REAL ESTATE

HOME-OFFICE less than 1 mile from Beltway in prestigious River Road - Bethesda area. Huge office with 4 treatment rooms, private office, business and reception room, lab and dark room; many built-ins. Prominent large house is well situated with backyard privacy, azaleas and dogwood. Telephone (202) 656-1106.

FOR RENT—St. Thomas, Virgin Islands, Sapphire Bay. Modern Apartment on one of the world's prettiest ocean beaches. Glorious sunning, swimming, snorkeling, boating, tennis. For rent by day (4 day minimum), week or month. Full kitchen; maid and linen service. Reasonable rent. Assure yourself of real vacation weather. Write or call owner: Paul Cooper, 7112 Armat Drive, Bethesda, Maryland 20034, (301) 654-3131 (day); 365-7112 (evening).

# INDEX OF ADVERTISERS

**These Advertisers Support Your Journal.**
**Please Give Them Your Support.**

| | *Page* |
|---|---|
| **Automated Medical Service** | |
| Health Auto-Data, Inc. | 22 |
| **Bank** | |
| National Bank of Washington | 2 |
| **Diatetic Products** | |
| Campbell Soup Company | T-665 |
| **Insurance** | |
| McDermott Insurance, Inc. | 9 |
| Mutual of Omaha | C-3 |
| Russell, Marsh E Kennedy | T-670 |
| **Equipment and Supplies** | |
| Kloman Surgical Supply Company | T-682 |
| **Investment Planning** | |
| Suter Associates Retirement Planning Company | T-673 |
| **Nurse Registries** | |
| Association of Undergraduate and Practical Nurse Registry | 9 |
| Capital Nurse Registry | T-670 |
| District of Columbia Manpower Administration | 9 |

**T-text**

| | *Page* |
|---|---|
| **Pharmaceuticals** | |
| Arch Laboratories | 9 |
| Beecham-Massengill | 18-19 |
| Bristol Laboratories | 14-15, 16 |
| Burton Parsons | 6 |
| Burroughs-Wellcome | T-680, 23 |
| Dorsey Laboratories | T-668 |
| C. B. Fleet Company | 11 |
| Geigy Pharmaceuticals | 4 |
| Eli-Lilly & Company | 8, 20 |
| Merrell-National Laboratories | 27, 28 |
| William P. Poythress | 21 |
| Riker Laboratories | 7 |
| A. H. Robins | T-677-678-679 |
| Roche Laboratories | C-2, 1, C-4 |
| G. D. Searle | T-666-667 |
| Smith, Kline and French | 24 |
| E. R. Squibb & Sons | 17 |
| The Upjohn Company | T-674-675-676 |
| USV Pharmaceuticals | 12-13 |
| Wallace Pharmaceuticals | T-672 |
| **Pharmacies** | |
| Maxwell & Tennyson | T-670 |
| Peoples Drug Stores | 10 |
| **Sanitariums** | |
| Kalorama Convalescent Home | T-682 |

# The girth control pill

# Tepanil® Ten-tab®

(continuous release form)

**(diethylpropion hydrochloride, N.F.)**

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

**Contraindications:** Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.
**Warning:** Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.
**Adverse Reactions:** Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.
**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.), TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

# Painful night leg cramps...

unwelcome bedfellow for any patient–including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

**Prescribing Information—Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

1-3326 (2877)

**Quinamm**™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

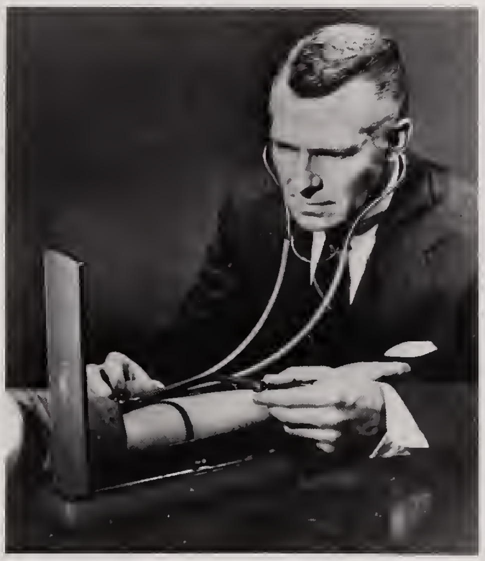
Doctor!

# Your Medical Society's Disability Income Plan Can Pay You Up To $225.00 a week

when you're sick or hurt
and can't work!

hat's right! The disability income lan available to you as a member f the Medical Society of the Disict of Columbia can pay you an ıcome to live on when an unexected sickness or accident cuts off our income. Can send you checks f up to $225.00 a week to pay ıe grocery bill, the house payment any of the numerous other exenses that continue whether you're ole to practice or not.

This is TAX-FREE CASH — ısh paid direct to you to use as ou see fit. These benefits are paid gardless of any other coverage ou have. What's more, your policy



is guaranteed renewable while the program remains in force regardless of the amount of benefits paid to you or any future changes in your health.

You'll be surprised how little this fine protection costs you, too. Thanks to the mass purchasing power of the Society, you are able to purchase this protection at special rates that save you money.

So get all the facts on this outstanding plan of protection today. Complete and mail the coupon below. You'll receive full details without obligation.

UNDERWRITTEN BY

Mutual of Omaha®
*The Company that pays*

Life Insurance Affiliate:
United of Omaha

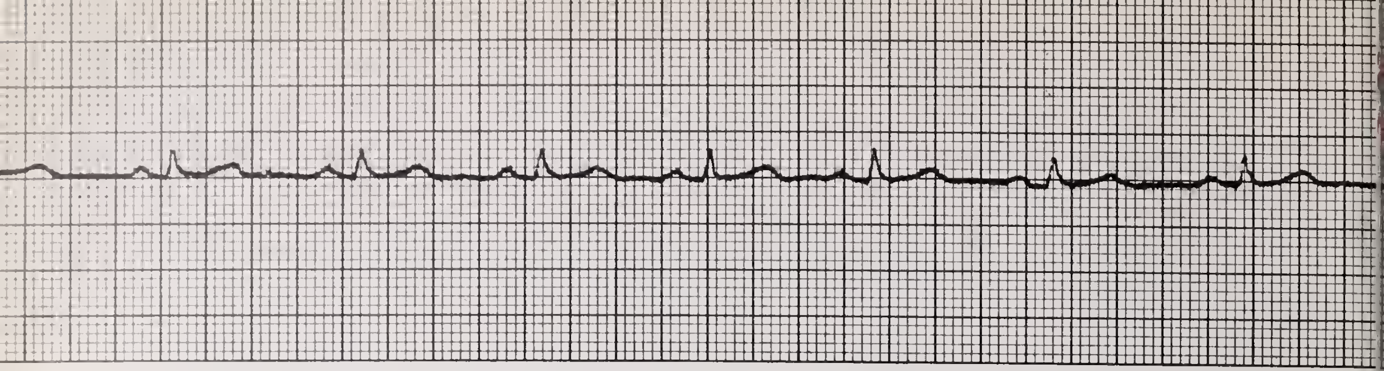
**Joseph E. Jones, Administrator**
**1666 Connecticut Avenue, N.W.**
**Washington, D. C. 20009 Phone (202) 483-3100**

Please rush me free facts on the special Disability Income Protection plan available to me as a member of the Medical Society of the District of Columbia.

Name____________________________________

Address__________________________________

City________________State__________ZIP________



# When disease is ruled out and psychic tension is implicated

# Valium® (diazepam)

## 2-mg, 5-mg, 10-mg tablets

# helps relax the patient and relieve his somatic symptoms

**Before prescribing, please consult complete product information,** a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose$^{T.M.}$ packages of 1000.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

*Volume 40 · Number 11 · November 1971*

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
21 DEC 1971

# Medical Annals of the District of Columbia

THE MEDICAL SOCIETY of the DISTRICT OF COLUMBIA

**Recent Developments in Peripheral Vascular Surgery**
JOHN M. KESHISHIAN, M.D., NICHOLAS P. D. SMYTH, M.D., PAUL C. ADKINS, M.D. FRANK A. CAMP, M.D., AND WILLIAM Z. YAHR, M.D.

**The Alternative Abortion**
BENJAMIN N. BRANCH, M.D., EARL S. HERR, M.D. AND E. JAMES LIEBERMAN, M.D.

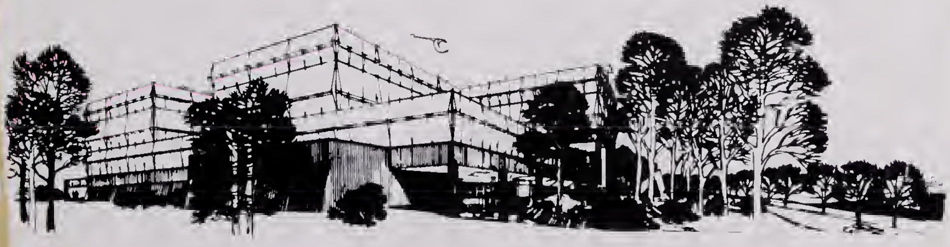
**Free Thyroxine Indices**
IRA D. GODWIN, M.D., C. BARRIE COOK, M.D. AND JIMMY BAILEY, M.S.

**Progression of Atrioventricular Block in Childhood**
LCDR WALTER V.R. VIEWEG, MC, USN, CDR RONALD A. PROULX, MC, USN, AND LCDR GERALD A. WOLFF, MC, USNR

**Leukemia or Leukemoid Reaction?**
CHANDLER SMITH, M.D.

**Pulmonary Alveolar Proteinosis**
RICHARD A. NICKLAS, M.D.

**Congenital Heart Disease in First Year of Life**
SIDNEY BLUMENTHAL, M.D. AND MARY JANE JESSE, M.D.



A crystalline-faceted lighthouse for life; this architect's rendering of a side view of the exterior of the new Children's Hospital National Medical Center, scheduled for completion in 1973, emphasizes the sense of openness that the angular glass walls will impart.

Library, Harvard Medical Lib.
25 Shattuck St.
Boston, Mass. 02115

# Patients fell asleep quickl

Dalmane (flurazepam HCl) 30 mg reduced awake time—both before and after falling asleep - by fifty percent of pretreatment values in patients with insomnia.[1,2]

Two sleep laboratory studies recently confirmed findings of earlier studies of this type, namely, that Dalmane 30 mg was effective in patients who had trouble falling asleep, staying asleep or both. One 30-mg capsule of Dalmane usually induced sleep within 22 minutes, decreased the number of awakenings and the wake time after the onset of sleep, and provided 7 to 8 hours of sleep without need to repeat dosage during the night.

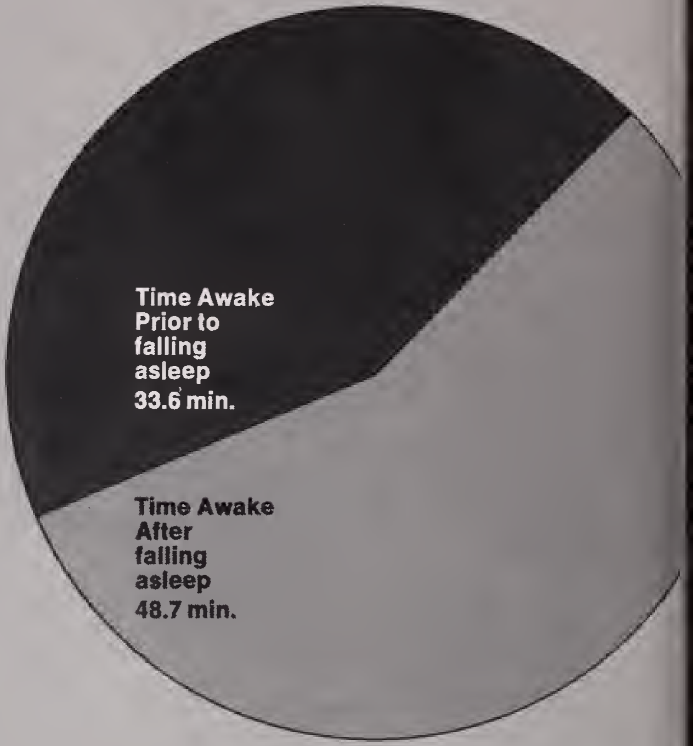
These studies utilized identical protocols and included eight insomniac patients. Sleep laboratory measurements in a limited number of patients are derived from all-night electroencephalographic, electro-oculographic and electromyographic tracings. Unlike traditional methods of evaluation, they are quantitative, reproducible and projectable to large numbers of subjects.

Results shown represent average values in all subjects for the three consecutive nights of placebo administration prior to Dalmane therapy and the seven consecutive nights on Dalmane 30 mg.

Dalmane is also relatively safe, as reported in clinical studies. Instances of morning "hangover" have been relatively infrequent; paradoxical reactions (excitement) and hypotension have been rare. Dizziness, drowsiness, lightheadedness and the like were the side effects noted most frequently, particularly in the elderly or debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

**References:** **1.** Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.
**2.** Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.

Before
Dalmane
(flurazepam HCl)

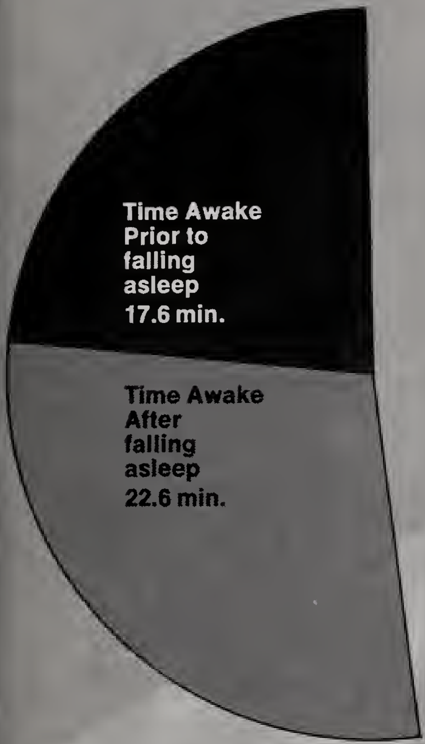


Measurements of sleep in the sleep laboratory are obtained with electroencephalographic, electro-oculographic and electromyographic recordings.

# and slept through the night

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

21 DEC 1971



**On Dalmane (flurazepam HCl)**

rage sleep laboratory measurements in cited studies

| *ameter* | Before Dalmane | On Dalmane |
|---|---|---|
| ne required to fall asleep | 33.6 min. | 17.6 min. |
| ke time after onset of sleep | 48.7 min. | 22.6 min. |
| mber of wakeful periods after nset of sleep | 12.2 | 8.4 |
| al sleep time | 420.0 min. | 447.5 min. |
| al sleep percent | 88.6 | 94.5 |

## linical effectiveness as roven in the sleep laboratory

# almane®

## lurazepam HCl)

**e 30-mg capsule h.s.—usual adult dosage.**
**e 15-mg capsule h.s.—initial dosage for lerly or debilitated patients.**

**Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

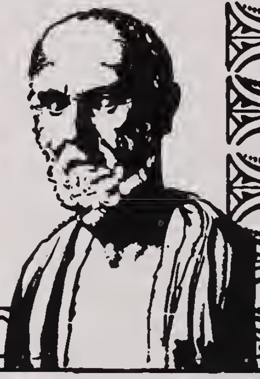
**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

"Healing is a matter of time, but sometimes also of opportunity."

Hippocrates, *Precepts*, Chapt. I



**and so is money-management**

After an initial exploratory examination of your finances by The National Bank of Washington, we can prescribe a course of action that will ensure your fiscal health through good times and bad.

Do you want to prepare for your family's security? There are all kinds of trusts and investments that can be established to suit your particular wants and needs.

Do you want to start a college trust fund to provide for your children's education at a time in your life when you might want to slow down? Our Trust Department knows just how to help you to do this.

How much should you invest in stocks and bonds? Our Investment Department won't give you a rule-of-thumb, but it will give you a plan as individual as you are.

Is the chore of day-to-day banking taking too much of your time or the time of your professional staff? Our bank provides you with prepaid, self-addressed envelopes that allow you to handle your checking or savings accounts right at your desk—at no cost to you.

Are you tired of paying monthly service charges on your checking account? At The National Bank of Washington, if you maintain a minimum balance of $300 in your regular personal checking account, there are no service charges.

Do you want to buy some special professional equipment, attend an international medical meeting overseas, buy another car or boat? At The National Bank of Washington you can get a consumer loan for a mere 8% annual percentage rate.

For *any* questions on money management, consult The National Bank of Washington. Twenty convenient locations. Main office: 14th and G Streets, N.W. 624-3000. Member FDIC.

The National
**BANK OF**
**WASHINGTON**

VOLUME 40 • NOVEMBER 1971

**EDITOR**
Wallace M. Yater, M.D.

**ASSOCIATE EDITOR**
Raymond Scalettar, M.D.

**ASSISTANT EDITOR**
Judith E. Perruso

**MANAGING EDITOR**
Francisco P. Ferraraccio

**EDITORIAL BOARD**
Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D

**CONSULTING EDITORS**
Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**

Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

**EXECUTIVE BOARD**

Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Leslie E. Hedgepath, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**

John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**

John Lewis Smith, III

---

* Ex officio member of the Executive Board

# MEDICAL ANNALS of the DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to the Editorial Offices, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original and one carbon copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the ANNALS is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

Short-acting diuretics may create abrupt,
inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow
rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

# You know diuretics medically.

**Hygroton**® chlorthalidone USP

Makes water, not waves.

But have you met them socially?

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-9

# MEDICAL ANNALS
# of the District of Columbia

## *Contents for November*

### SCIENTIFIC ARTICLES

Recent Developments in Peripheral Vascular Surgery—The Arterial Graft of Bovine Origin. *John M. Keshishian, M.D.*, *Nicholas P. D. Smyth, M.D.*, *Paul C. Adkins, M.D.*, Washington, *Frank A. Camp, M.D.*, New Brunswick, New Jersey, and *William Z. Yahr, M.D.*, Miami, Florida 687

The Alternative Abortion. *Benjamin N. Branch, M.D.*, *Earl S. Herr, M.D.* and *E. James Lieberman, M.D.*, Washington 691

Free Thyroxine Indices. *Ira D. Godwin, M.D.*, *C. Barrie Cook, M.D.* and *Jimmy Bailey, M.S.*, Fairfax, Virginia 697

Gradual Progression of First Degree Atrioventricular Block to Complete Atrioventricular Block in Childhood. *LCDR Walter V. R. Vieweg, MC, USN*, Bethesda, Maryland, *CDR Ronald A. Proulx, MC, USN*, and *LCDR Gerald A. Wolff, MC, USNR*, Oakland, California 702

Clinocopathologic Conference: Leukemia or Leukemoid Reaction? *Chandler Smith M.D.*, Washington 706

Pulmonary Alveolar Proteinosis: Report of a Case. *Richard A. Nicklas, M.D.*, Ann Arbor, Michigan 710

Congential Heart Disease in the First Year of Life. *Sidney Blumenthal, M.D. and Mary Jane Jesse, M.D.*, New York, New York 713

### EDITORIAL

Demonstrations in the District of Columbia: A Message from the Emergency Medical Committee 721

### MISCELLANY

President's Page: "Medical Records Act" 719

D.C. Health Notes: "Pediatric Nurse-Associate (Practitioner)" 722

D.C. Mental Health Administration: "The Rehabilitation Center for Alcoholics" 723

Book Reviews 735

Obituaries 737

New Members 738

*Classified Advertisements* *Adv. 25*

*Medical Annals Staff and Officers of the Medical Society* *Adv. 3*

*Index of Advertisers* *Adv. 26*

---

COPYRIGHT ©, 1971 BY THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*

WHEN TRAUMA
RESULTS IN PAIN.

his photograph in no way implies
n endorsement of Norgesic by
oe Namath

# NORGESIC®

(orphenadrine citrate, 25 mg.; aspirin, 225 mg.; phenacetin, 160 mg.; caffeine, 30 mg.)

the versatile analgesic

offers fast onset of symptomatic relief

produces a high level of analgesia

affords sustained pain relieving action

provides predictable relief—
overall satisfactory response in
approximately 80% of patients

**Contraindications:** Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.

Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).

**Warnings:** USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.

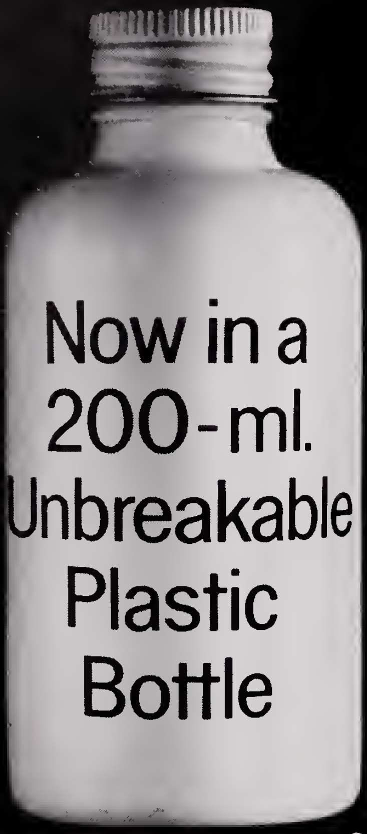
**Precautions:** It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.

**Adverse Reactions:** Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established.

**Dosage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

**Riker Laboratories, Inc.**
NORTHRIDGE, CALIFORNIA 91324
A SUBSIDIARY OF 3M COMPANY

Norgesic...the versatile analgesic provides effective analgesia and relief of associated muscle spasm


Now in a
200-ml.
Unbreakable
Plastic
Bottle

Same price as
150-ml. size*

Two dosage
strengths–
125 mg./5 ml.
and
250 mg./5 ml.

V-Cillin K,® Pediatric

potassium
phenoxymethyl
penicillin

Lilly

100210

*Additional information
available to the
profession on request.*

Eli Lilly and Company
Indianapolis, Indiana 46206

**Based on Lilly selling price to wholesalers.*

MEDICAL ANNALS
of the District of Columbia

November 1971
VOLUME 40 • NUMBER 11

# Recent Developments in Peripheral Vascular Surgery—The Arterial Graft of Bovine Origin*

JOHN M. KESHISHIAN, M.D.†, NICHOLAS P. D. SMYTH, M.D.‡,
PAUL C. ADKINS, M.D.§, FRANK A. CAMP, M.D.||,
AND WILLIAM Z. YAHR, M.D.¶

THE RECENT INTEREST in the development of the modified bovine arterial heterograft has provoked a number of questions in the local medical community which are deserving of explanations. This report has been prepared to that end.

Recently we described our experiences [1-3] on the results of our implantation of this graft in some 100 patients. At this writing our experience exceeds 165 grafts.

The bovine graft was developed primarily for use in peripheral arteries. Since the majority of patients requiring peripheral vascular surgery fall into the category of femoro-popliteal occlusive arterial disease, our remarks are primarily directed to procedures for that disease.

In the vicissitudes of the development of arterial surgery, many techniques for reconstruction of the superficial femoral artery were tried and abandoned. This has included the well-known plastic prostheses as well as a brief period in which the saphenous vein was tried and abandoned, unfortunately, only to be successfully resurrected by Linton and his associates.[4] The plastic prosthesis in the lower extremity proved to be eminently unsuccessful; failure rates approaching 50-75% within the first 2 to 3 years after implantation of a plastic prosthesis led to the gradual abandonment of these tubes.[5] The resurrection of the saphenous vein by Linton after Kunlin's early experiences[6] provided an almost ideal material which could be used as a by-pass graft, patch-graft, or a combination patch-by-pass in conjunction with endarterectomy.

The pathology in the superficial femoral artery is usually confined to Hunter's canal but may be present above or below this level and even down into the distal popliteal artery. The number of persons with disabling intermittent claudication seems to be on the increase, commensurate with the ability of our medical confreres to ameliorate arteriosclerotic occlusive symptoms.

When it has been decided that a patient needs a vascular reconstructive procedure, the vascular surgeon must choose the appropriate operation and plan how he should proceed. To this end, preliminary diagnostic tests including standard arteriography, Cine arteriography, Doppler studies, and oscillometry should be carried out. In this way the surgeon will have the best possible knowledge of the site of the lesion, the condition of the vessels above and below, and the extent of "runoff ". If the patient has had a previous operation in which the saphenous vein was ligated and stripped, this poses a problem. If the saphenous vein is present, the surgeon will plan to use it, if possible. This vein is generally regarded as the best replacement tissue for femoro-popliteal arterial revascularization. However, there are several drawbacks: 1) The vein may have been surgically removed, and 2) it may be present but unuseable because of multibranching, varicosities, or inadequate size.

As we have stated elsewhere,[1] the latter is an unfortunate corollary of this disease since the chronically ischemic leg may have a small shrunken vein unsuitable for use when it is most needed.

This, then, presents a problem for the vascular surgeon. If no saphenous vein is available, and the use of a plastic prosthesis may lead to graft failure in a short time, what other choice does he have? It was to this end that Rosenberg and his associates[7] began

---

* Supported in part by The Potomic Fund for Cardiovascular Research.

† Assistant Clinical Professor of Surgery, The George Washington University School of Medicine, 1331 H Street, N.W., Washington, D.C. 20005.

‡ Associate Clinical Professor of Surgery, The George Washington University School of Medicine.

§ Professor and Chairman, Department of Surgery, The George Washington University School of Medicine

|| Division of Clinical Research, Johnson & Johnson, New Brunswick, New Jersey.

¶ Department of Surgery, Mount Sinai Hospital of Greater Miami, Miami, Florida.

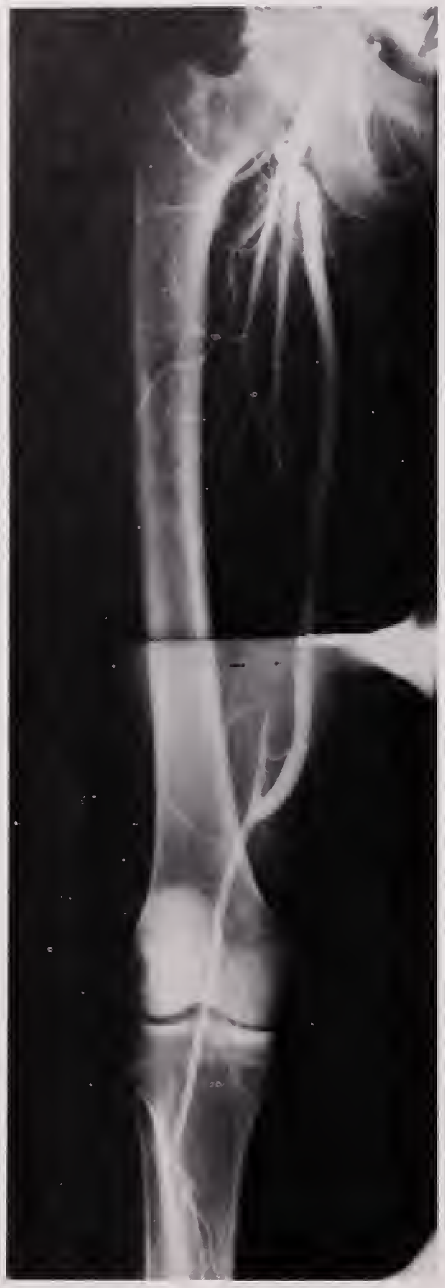


FIG. 1. Postoperative arteriogram showing the appearance of an 8 mm arterial graft bypassing an obstructed superficial femoral artery. This patient was grafted 2½ years ago.

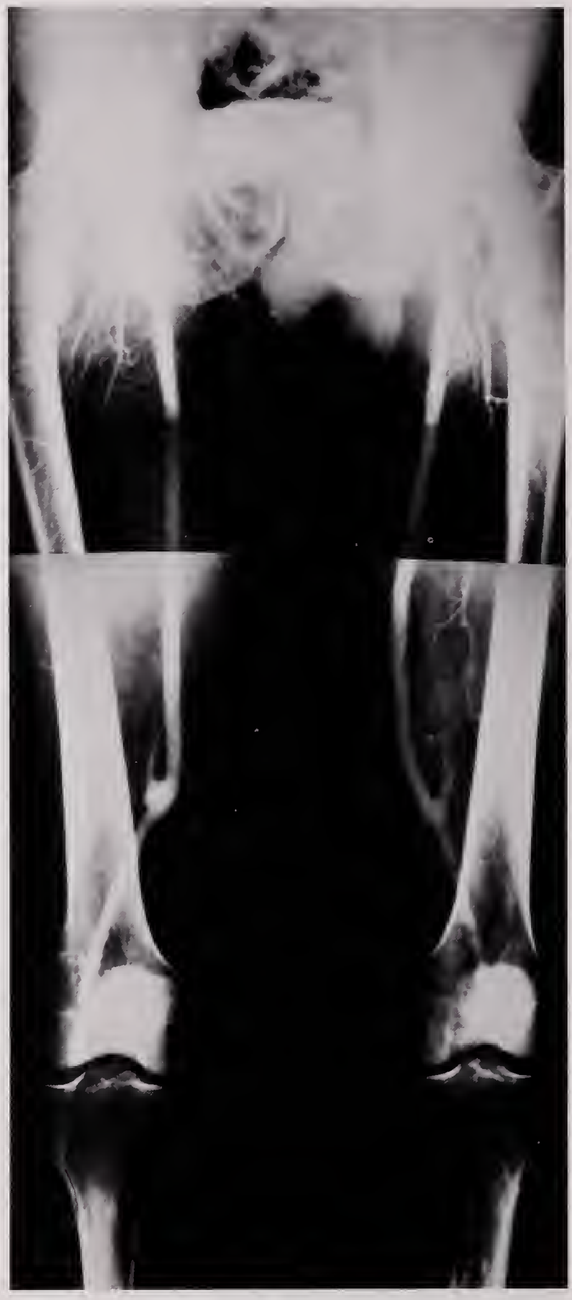


FIG. 2. Bilateral femoro-popliteal bypass grafts implanted over 2 years ago in a patient with severe occlusive disease and poor runoff.

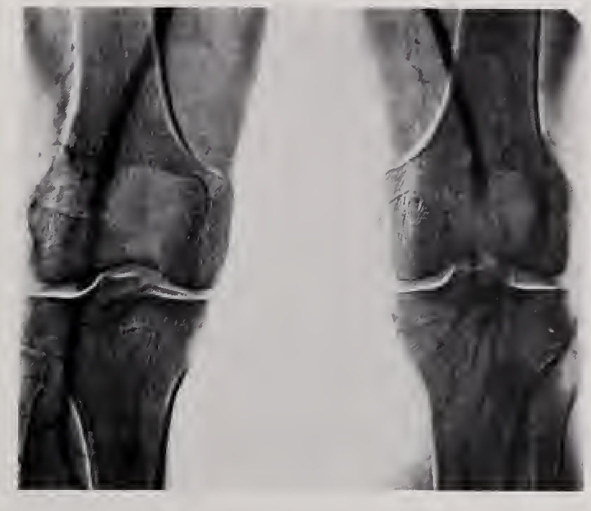


**FIG. 3. Subtraction studies of postoperative arteriogram revealing multiple collateral branching on the left. This provides an adequate runoff to maintain patency of the graft.**

their studies on the preparation of a chemically modified, non-antigenic, biologically acceptable bovine heterograft.

In essence, these grafts are prepared from fresh beef carotid arteries which are obtained at the slaughter house and shipped to the processing laboratory. There all extraneous tissue is removed and the small tributaries ligated. After thorough washing, the artery is bathed in a solution of Ficin, which is a proteolytic enzyme derived from the wild fig activated by a trace of L-cysteine and buffered to a pH of 5.5. After 2½ hours of digestion at 37°C this activity is terminated by deactivation with 1% aqueous solution of sodium chlorite. The graft is then placed on a glass or metal mandril and tanned in a 1.3% dialdehyde starch solution buffered to pH 8.8. After the tanning is completed the graft is tested for airleaks with air pressure equivalent to 150 mg Hg. After completion of this final process the graft is stored over a glass tube in a 40% ethanol solution containing 1% propylene oxide.

The enzyme tanning process is carried out to remove more than 80% of the soluble antigens in the muscularis and the elastica and to alter the cross linkages of the collagen molecules to make them more stable. This all leads to a strong non-viable tube whose tensile strength is greater than the untreated original artery and whose electrical potential is negative, thus making it unfavorable for thrombus formation and with handling properties ideal for use as an arterial conduit. Reproduceable laboratory studies have shown that the injection of a suspension of this graft in rabbits causes no detectable antibody formation.

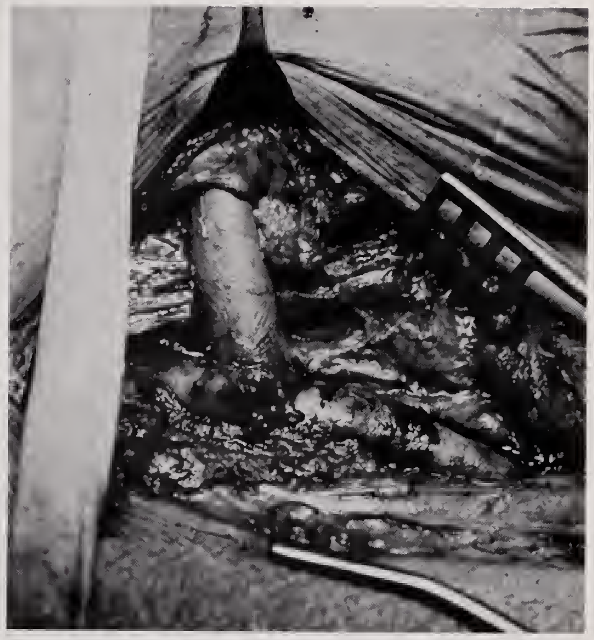


**FIG. 4. Arterial graft after completion of anastomoses. The graft has been used as a cross-femoral jump graft from 1 common femoral to another. This is particularly useful when an iliac artery is obstructed and entering the peritoneal cavity might increase the morbidity.**

From the surgeon's point of view the graft is an ideal substitute to use when arterial grafting is indicated. We, as well as others, now use this routinely in preference to the saphenous vein. Besides a reduction in the operative time there is a lower incidence of postoperative discomfort which may be occasioned by the dissection and removal of the saphenous vein.

To date, this graft has been used in the aorta, iliac artery, femoral artery, popliteal artery, carotid artery, axillary artery, subclavian artery, and renal artery (table I). These have been either as bypass grafts, replacement grafts, or patch grafts. In our most recent publication[3] we reported an overall success rate of 83% patency after 2½ years of follow-up. This is an acceptable figure in patients with vascular disorders.

## Summary

A biological, non-viable, non-antigenic arterial conduit has been developed from fresh bovine carotid arteries.

Laboratory and clinical studies have shown its suitability as a replacement for peripheral arteries in humans.

TABLE 1: Locations of Arterial Grafts

| | Number Patients | Number Grafts | Number Failures (Patients) | Grafts |
|---|---|---|---|---|
| Femoro-popliteal bypass | 62 | 93 | 18 29.0% | 30 32.2% |
| Aorto-renal bypass | 1 | 1 | – | – |
| Axillo-femoral bypass | 2 | 5 | died | – |
| Axillo-popliteal bypass | 1 | 3 | died | – |
| Artery replacement | 3 | 3 | – | – |
| Patch grafts | 8 | 8 | – | – |
| Subclavian-brachial bypass | 1 | 2 | – | – |
| Ilio-femoral bypass | 5 | 5 | – | – |
| Carotid-subclavian bypass | 5 | 5 | – | – |
| Popliteal-popliteal bypass | 2 | 2 | – | – |
| Femoral-tibial bypass | 3 | 4 | 1 33.3% | 1 33.3% |
| Aorto-coronary bypass | 1 | 1 | – | – |
| Femoro-femoral bypass | 11 | 11 | – | – |
| Aorto-femoral bypass | 3 | 3 | 1 33.3% | 1 33.3% |
| | 108* | 146 | 20 (18.5%) | 32 (21.9%) |

* Of the 108 patients there were 20 failures (18.5%), of which 16 required amputation (14.8%). Of the 108 patients there were 12 deaths not related to the graft procedure (11.1%).

N.B. This chart is a 'raw' mix of all patients, including diabetics.

## References

1. KESHISHIAN, J. M., SMYTH, N. P. D., ADKINS, P. C., CAMP, F. and YAHR, W. Z.: Clinical experience with the modified bovine arterial heterograft, Ann. Surg., 1970, 172, 690.
2. KESHISHIAN, J. M., SMYTH, N. P. D., ADKINS, P. C., CAMP, F., YAHR, W. Z. and HILL, J. L.: Modified Bovine Grafts for Complex Arterial Problems, *Management of Arterial Occlusive Disease*, Year Book Publ., 1971.
3. KESHISHIAN, J. M., SMYTH, N. P. D., ADKINS, P. C., CAMP, F. and YAHR, W. Z.: Technical aspects of grafting with the new chemically modified arterial graft (Bovine Origin), Surg., Gynec., Obstet. (in press), June 1971.
4. LINTON, R. R. and DARLING, R. C.: Autogenous saphenous vein bypass grafts in femoro-popliteal obliterative arterial disease, Surgery, 1962, 51, 62.
5. EDWARDS, W. S.: Late occlusion of femoral and popliteal fabric arterial grafts, Surg., Gynec, Obstet., 1960, 110, 714.
6. KUNLIN, J.: Le traitement de l'ischemic arteritique par la greffe veneuse longue, Rev. Chir. Orthop., 1951, 70, 206.
7. ROSENBERG, N., GAUGHRAN, E. R. L., HENDERSON, J., LORD, G. H. and DOUGLAS, J. F.: The use of segmental arterial implants prepared by enzymatic modification of heterologous blood vessels, Surg. Forum, 1956, 6, 242.

# The Alternative Abortion

BENJAMIN N. BRANCH, M.D., EARL S. HERR, M.D.
AND E. JAMES LIEBERMAN, M.D.*

ABORTION CONTINUES TO BE a controversial subject within and without the medical community and will remain so as long as there exist differential moral and theologic judgments concerning the value of the "life" of the pregnant woman and the fetus.

Nevertheless, the majority of physicians agree that there is a necessity for legal reform, and that specific changes must take place in our health-care delivery systems to ensure the unhappily pregnant woman a safe and compassionate abortion.

This position has been variously articulated and supported by professional groups including the American Public Health Association,[1,2] the American Medical Association,[3] the National Medical Association, the American College of Obstetricians and Gynecologists,[4] and the American Psychiatric Association.

In late 1970 the Ad Hoc Committee of the D. C. Society of Medicine recorded "that when termination of pregnancy is in conformity with the laws of the District of Columbia, the interruption of pregnancy should be a matter between a licensed doctor of medicine and his patient and that the doctor will be governed by the same prevailing professional standards and ethics of medical practice which govern all medical-surgical procedures. It is understood that appropriate consultation should be obtained when indicated."

The D. C. Health and Welfare Committee's Report written by Henry S. Robinson concerning abortion practices in the District of Columbia is a model of enlightened consideration of extending humane services to all in need regardless of socio-economic status.

All physicians have observed the desperation manifested by the unhappily pregnant woman who feels 'trapped' and the frequency with which she will knowingly risk her health or life at the hands of the unofficial abortionist rather than continue an unwanted pregnancy.

The question is not whether abortions will take place, or how many, for it is certain that women will continue to seek physical and emotional relief from the burdens of unplanned pregnancy, but how the medical community can face the challenge of providing full-scale services equal to the projected demand—500-600 abortions/1,000 live births.[5] These 'full-scale services must provide not only the presently provided absolute minimum of medically safe termination of pregnancy but the extensive counseling frequently needed, in addition to contraceptive servicing, laboratory and other auxiliary facilities. These services must be much less expensive than they are now, much less time-consuming and oppressive, and ensure women some vestige of privacy if new services are to be in any way competitive with 'unofficial' abortionists.

New State laws and fresh light on old laws as well as medical and sociological experience gained from countries with reformed laws now provide a firm base upon which such models can be constructed. Although the safety of outpatient abortion continues to be debated in this country, recent experience[6,7] clearly indicates that it is now possible to lure women away from illegal abortion 'mills' and in so doing demonstrate a greatly diminished maternal mortality and morbidity associated with abortions. The degree of change in morbidity appears to bear an inverse relationship to the increase in the number of "legal" abortions performed.[8] Already abortion complication has been displaced as the leading cause of maternal death in some urban areas.

Anticipating a U. S. Supreme Court clarification of the existent D. C. Code Section 22-201 that abortion is illegal unless "done as necessary for the preservation of the mother's life or health and under the direction of a competent licensed practitioner of medicine," many metropolitan Washington physicians and hospitals have been "legally" terminating pregnancies since Judge Gesell's decision in late 1969. Few then could argue with the standard World Health Organization's (WHO) definition: "Health is a state of complete physical, emotional and social well-being, not merely the absence of disease or infirmity."

At about the same time, PRETERM recognized the legal possibility, under the 1901 statute, of establishing in Washington a demonstration service project to meet the needs of women in developing appropriate counseling and other accessory services to accompany medically safe outpatient abortion and to accumulate the experience and expertise necessary to serve the needs of the medical community and act in an advisory capacity in institutions (hospitals, physician groups, medical schools) and government bodies (U. S. and abroad) and international agencies (UN, WHO, IPPF, etc.) anxious to develop and maintain less costly, expeditious, and compassionate full-scale abortion services.

---

* The authors are Medical Director, Assistant Medical Director and Psychiatric Consultant respectively of PRETERM, Inc., 1726 Eye Street, N.W., Washington, D.C. 20006—organized as a non-profit, tax-exempt, District of Columbia Corporation.

The April 21, 1971 U. S. Supreme Court decision in Vuitch substantially clarified the conditions under which pregnancy may be terminated, making it clear that psychological or mental health is indeed encompassed by the term "health" in the statute, and that physicians may continue to exercise their professional judgment, free from the legal burden to prove in each instance that a particular abortion was absolutely necessary to preserve psychological or physical health from the risk of unwanted pregnancy.

However, " . . . one of the largest deterrents to a liberalized abortion policy, in spite of the public clamor, is the health profession itself. Abortion is foreign to the attitudes fostered in physicians during their medical training; the gynecologist, the one to do the abortion, has a basic psychologic conflict. A whole generation of professional health workers refuses to let the myth die out that abortion will irreparably harm a woman and somehow place a stigma upon her. Physicians remain adamant. The male physician won't let the woman decide—reminiscent of the moralistic attitude about pain relief in childbirth before Queen Victoria demanded it for herself. The pregnant woman symbolizes proof of male potency, and if the male loosens his rule over women and grants them the right to dispose of that proof when they want to, the men then feel terribly threatened lest women can, at will, rob them of their potency and masculinity. This flaunting of traditional subservience may be one of the more powerful and less conscious determinants of our irrational opposition to granting women the right to decide matters in this crucial area of their lives. It may also function in the frequent professional insistence upon sterilization as a 'package deal' with abortion. In this way the male physician can maintain control."[9]

The above, more factual and challenging than merely in concert with vogueish feminism, additionally leads to 3 further concerns: First, that in discussing alternatives to existent hospital abortions, primary consideration should be given to the needs of the woman, rather than the needs of the physician or our frequently dated, hospital-oriented health-care delivery system. Although data from eastern Europe and New York City suggest that morbidity data from free-standing hospital-affiliated (but not necessarily hospital-attached) services compare quite favorably with hospital outpatient data, the fact remains to be substantiated locally. In conjunction with the Center for Disease Control (CDC), Atlanta, Georgia, and the Joint Project for the Study of Abortion (Tietze-JPSA) which includes 60 hospital and treatment facilities in 12 states, PRETERM will collect such appropriate local follow-up data.

Second, that since abortion counseling is a fledgling art, that model counselors, and model counseling techniques must be developed so that physicians may be able to evaluate their results and choose whether to persist in attempts to be "all things to all people" or to delegate responsibility to appropriate individuals to remove from them the burden of counseling, so that they may effectively serve their patients, using their own unique knowledge, skills and experience, in a more appropriate and efficient manner. PRETERM will develop, test and evaluate a variety of counseling models.

Third, that most physicians, including medical school faculty, have historically thought of abortions and abortionists as undesirable and done little to avail themselves of modern rather than classical abortion techniques. The following sections are prototypes which reflect some facets of the present state of the art, which are undergoing constant review and evaluation at PRETERM and elsewhere. They are presented in order to expand and clarify the concepts of abortion counseling, and to indicate the simplicity and safety of vacuum aspiration.

### Abortion by Vacuum Aspiration

*General considerations.* All studies confirm that vacuum aspiration abortion carries a low morbidity rate before 12 weeks from last menstrual period. Although adequate data are not presently available, concern exists that the firm cervix and small uterine size before 8 weeks from last menstrual period may result in more cervical lacerations and uterine perforations. Therefore, it is recommended that vacuum aspiration abortions in a non-hospital-attached facility be restricted to the period 8 to 12 weeks from last menstrual period, women coming earlier being electively appointed at 8 weeks from last menstrual period, and those coming later being referred to a hospital-attached facility.

If this "optimal appointment" system is employed, the use of 2 different techniques is recommended: 1 for pregnancies at 8 weeks, and a second for pregnancies 8 to 12 weeks from last menstrual period. Specifically, experience has indicated that the products of conception can be thoroughly evacuated through a 6 mm outer diameter flexible cannula until 8 weeks. Beyond 8 weeks a larger lumen and dilation of the cervix are required.

*Medication.* No routine analgesics, sedatives, tranquilizers, oxytocics or antibiotics are used. Valium, syntochinon, and methergin are occasionally indicated. In anxious patients 5-7.5 mg of IV Valium is extremely useful just prior to dilation.

*Sterile technique.* Normal flora from the cervix will inevitably be introduced into the uterus via the sterile instruments traversing the cervical canal, but:

1. The presence of pathogenic flora in the cervix, i.e., acute cervicitis, as evidenced by purulent discharge on speculum examination, should be appropriately treated prior to vacuum aspiration.
2. Excess mucus may be removed from the cervix with large sterile cotton swabs; there is no fully effective antiseptic agent to sterilize the cervix.
3. The use of the no-touch aseptic technique is especially appropriate for early termination by vacuum aspiration. Sterile gloves are not necessary and tend to give a false sense of security. The operator must not introduce into the uterus, or touch the cervix with any portion of an instrument that has had prior contact with any non-sterile object.
4. Re-entry of the uterus with an instrument should be minimized. Vacuum aspiration can usually be completed with no more than 1 re-introduction of any single instrument.

*Preparation.* No draping is indicated except a simple non-sterile sheet over the abdomen and thighs for the patient's modesty and comfort. Bimanual pelvic examination with a single, non-sterile examining glove is always repeated immediately before the termination procedure to confirm uterine size and position and to evaluate the adnexae.

All patients can be prepared for termination with a pre-pak consisting of sterile speculum, tenaculum, short uterine sound, and 3 large cotton-tipped swabs.

A short-bladed domed bivalve speculum is employed to visualize the cervix and stretch the vaginal fornices. Large sterile cotton-tipped swabs are used to clean the cervical os. A single-toothed tenaculum is used to stabilize the cervix at 12 o'clock position for an anteverted uterus and at 6 o'clock for a retroverted uterus. A properly designed tenaculum can be placed loosely on the cervix with little or no pain to the patient, with 1 jaw well inside the cervical os. After the paracervical block the tenaculum can be fully closed without discomfort.

*Anesthesia.* An effective paracervical block can be achieved with 90% surety by the use of 10cc of 1% lidocaine, equally divided at positions 12, 4, and 8 o'clock. With softened cervical and paracervical tissue, the needle can be gently inserted at the reflection of the vaginal epithelium onto the cervix a distance of no more than 1 cm for injection with little or no discomfort to the patient. A 22G x 3½″ needle is used to provide ease of access to the cervix and to minimize blood loss. Withdrawal of the barrel of the finger-tip control syringe is required at each injection site to ensure that the lidocaine is not injected intravascularly. The depth of the uterine cavity should be determined with sound and recorded. The depth in centimeters will be approximately the same as the number of weeks from the last menstrual period.

*Instruments.* After sounding, the physician must elect whether dilation is necessary, employing his prior estimation of uterine size and confirmed by uterine depth, the latter being the most reproducible.

Sterile tray #1: 6-8 weeks from last menstrual period or 6-8-cm depth (no dilation necessary) Optimal time, 8 weeks. stainless-steel emesis basin; 7 mm diameter sharp curette; Randall ¼ curve kidney-stone forceps; 4 gauze pads 2 x 2.

Sterile tray #2: 8-12 weeks from last menstrual period or 8-12 cm depth (dilation needed); 12 x 8 x 2″ stainless-steel tray; stainless-steel emesis basin; 8 Pratt dilators (French 13-15 through French 41-43, i.e., 4.3 mm through 14.3 mm); 10 mm diameter sharp curette; Randall ¼ curve kidney-stone forcepts; curved serrated sponge forceps or ovum forceps; 8 gauze pads 2 x 2.

While allowing 2 to 3 minutes for the paracervical block to become fully effective, the appropriate sterile tray is chosen and the convex aspect of the emesis basin set against the patient's buttocks, serving as a receptacle for used instruments when dilation is required.

## Early Termination by Vacuum Aspiration Without Dilation (6 to 8 Weeks from Last Menstrual Period)

A Karman 6 mm diameter cannula can be effectively used to completely evacuate the uterus until 8 weeks. This flexible polyethylene cannula can, with rare exception, be inserted through the undilated cervix even in nulliparous patients, since the cervix has usually softened sufficiently if pregnancies earlier than 8 weeks are not terminated electively.

The Karman cannula is designed with 2 non-opposed openings placed 180° apart near the flexible tip. The "feel" of suction upon products of conception compared to the "feel" of the 2 opposed walls of the empty uterus against these openings informs the operator of the presence and then of the absence of the products of conception; an empty uterus will consistently "grasp" tightly onto the tip of a cannula of this design.

The cannula should be inserted slowly through the cervical canal with a barely noticeable twisting motion and advanced gently in the direction of the uterine fundus until the slight curve of the instrument matches that of the uterus and the cannula then employed as a sound, again noting the uterine depth. The suction tubing should always be checked to assure that it is delivering negative rather than positive pressure. When the tip has reached the fundus of the uterus or meets the moderate resistance of the sac, the cannula should be attached to the suction tubing and negative pressure allowed to develop to the capacity of the unit, not less than 25″ Hg. Then the tip of the cannula should be rotated ¼th turn in each direction in the frontal plane of the fundus for approximately 60 seconds. Usually the first aspirated material seen will be amniotic fluid, followed by visible tissue and blood. Gentle "jiggling" of the tip in the middle of the uterus helps to clear the apertures of tissue. It is frequently necessary to interrupt the negative pressure once or twice during the above procedure in order to facilitate flow of tissue through the cannula and tubing. The appearance of "red foam" in the cannula is frequently accompanied by firm uterine contractions "grasping" the tip of the cannula and indicates that evacuation is complete. If the aspirated material approximates the expected amount the cannula should then be removed from the cervix. A small curette and a small forceps should be used to verify the completeness of the aspiration procedure.

### Termination with Dilation (8 to 12 Weeks from Last Menstrual Period)

A transparent plastic cannula is chosen with outer diameter in mm approximately equal to the uterine depth in cm. The gradual taper of Pratt dilators provides ease of dilation with minimal risk of cervical laceration. Dilation can usually begin with a #21 dilator (dilator number divided by 3 is equal to dilator diameter in mm) and proceed carefully, usually to 2/3 to 1 mm greater than the cannula size chosen. The dilator may be "palmed," rather than gripped like a pencil. The slight twisting motion which the palm-grip allows has been called "the master's touch." The cannula should be used as described above. It is not a curette. The negative pressure dislodges all products of conception. The motion of the tip of the cannula facilitates tissue pickup. It is important that the cannula be of a design that allows visual and palpable information on the status of evacuation. The use of a stainless-steel cannula is less satisfactory because of its rigidity, opacity, and large mass. A cannula of large compliance is also to be avoided because of the excess dampening effect.

### Verification of Total Uterine Evacuation

Retention of products is always preventable; the operator must always judge the completeness of the evacuation by each of the following criteria:

1. Estimation of quantity of products of conception by uterine size before and after aspiration, determined by bimanual examination and uterine depth (sounding).
2. "Feel" of uterine wall with aspiration cannula (this is of little value with a steel cannula but is very valuable with a Karman cannula and most other plastic cannulae).
3. Feel of "myometrium" with a sharp curette.
4. Feel of uterine wall with a small forceps (such as the Randall's ¼ curve kidney-stone forceps) which can grasp the wall.
5. Inspection of tissue removed.

It is essential that the operator properly examine all tissue removed:

1. To assure the presence of villi in early pregnancy, ruling out ectopic pregnancy.
2. To assure the absence of molar degeneration.
3. To ascertain the adequacy of evacuation.

In early pregnancy the quantity of evacuated material is of primary interest. After 10 weeks it becomes important to identify all large fetal parts which have been evacuated. Tissue examination includes:

1. Visual inspection through the cannula of all tissue as it leaves the uterus.
2. Visual inspection of all tissue over a suitably designed examining screen within the vacuum system/tubing circuit during the actual evacuation.
3. Visual and manual inspection of all tissue immediately after evacuation.

A physician can easily and routinely provide non-traumatic pregnancy termination (the "alternative abortion") by following the preceding medical procedures if he is alert and responsive to the psychological status and needs of each woman. No matter how well the counselor may give support, if the physician is merely attentive to the medical procedure and is thus unresponsive to the emotional status, he is liable to destroy the trust relationship already evolved. Then the pregnancy termination, which could so easily have been a non-traumatic and psychologically productive experience is changed into a traumatic event. This alternative kind of abortion, done early, on an outpatient basis with only local anesthesia inexpensively, and with appropriate counseling by a physician who is warm, aware, and responsive to the psychological state of the unhappily pregnant woman, is non-traumatic and beneficial to the woman's physical, emotional, and social health.

## Counseling

Counseling at PRETERM is done by women of a variety of backgrounds who are selected (vide infra), trained, and supervised for what is essentially a new kind of service. Professionals are regularly involved in supervisory and training sessions and in consultation for unusually difficult problems, but abortion-counseling is very different in philosophy and method from the psychiatric examination which has previously been used to legally justify therapeutic abortion on psychiatric grounds.[10]

In recent years approximately 90% of legal abortions performed in the U. S. were justified on psychiatric grounds, since there are few physical conditions which stand in the way of normal gestation and parturition. Psychiatrists, as a result, have been put in the position of diagnosing a woman as mentally ill or seriously at risk of mental disturbance so that she can terminate an unwanted pregnancy. These women who consult psychiatrists, usually only once, for 50 minutes or less, are put in the position of having to exaggerate or misrepresent their feelings and to tell the doctor what they think he needs to hear in order to be able to recommend abortion. The result is scarcely compatible with an honest presentation of self by the patient or an unbiased judgment by the diagnostician. This medically insignificant ceremony is essentially debasing of both parties, since the psychiatrist knows he is being used improperly by both the woman and the abortion review committees or obstetricians. Improperly, because he is giving sanction required by law—not by standards of good medical practice—for a procedure which is controversial on religious, not medical grounds. So the psychiatrist becomes a legal adjunct, a pseudo-priest, whose value as a mental health specialist is reduced commensurately. Some psychiatrists accept this by swallowing their pride and using the consultation as a preventive mental health opportunity; a few psychiatrists have no pride and take advantage of the patient's distress to charge a large fee for a standard report based on a very cursory examination.

A basic counseling concept is that the request for abortion is a sign of a life crisis. The counselor's job is to establish the extent of the crisis and to determine how it may be resolved favorably, and what needs to be done to ensure that result. The ultimate decision as to the necessity for abortion and its justification on grounds of "life or health", including mental health, is always in the hands of the operating physician, who uses the counselor's report as he might that of any other consultant. If a psychiatric consultation is indicated it will be obtained, as is the case in good medical practice generally, but the psychiatrist will not be used as a 'fall guy' or a 'rubber stamp'.

A few major principles guide the counseling procedure. First, every abortion applicant is regarded as an ambivalent person. The counselor might assess the forces, internal and external, which drive the pregnant woman toward and away from parenthood at this particular time. Ambivalence is a key factor —strong positive and negative feelings about the same thing (having a baby) do not add up to zero but rather to conflict. The patient should be helped to acknowledge ambivalence and to resolve it in the direction she chooses, not by ignoring the opposite feelings, but by accepting the complexity and difficulty of this choice, and making the best decision based on full knowledge of the alternatives and possible consequences.

Second, the full awareness of consequences is part of the process of obtaining informed consent for an abortion. These women must have a clear understanding of what abortion involves, physically and emotionally, and informed consent must be more than a legal requirement, in fact a pre-eminent psychological necessity. There may be sadness after an abortion, but remorse, regret, and depression are not appropriate.

It is ironical that the obstetrician obtains legal consent for delivery after the onset of labor—not much choice then. Yet parenthood is so basic a decision that it cannot rationally be treated so casually. Some obstetricians already ask each prenatal patient when she wishes the pregnancy terminated—at term or immediately. Such an approach to childbearing and rearing is a boon to the mental health of all concerned and a boost to the integrity and stability of family life.

Third, abortion is medically and logistically unsatisfactory as a primary method of birth control, even though it is frequently so used in every part of the world. The counselor should view the need for abortion as a kind of failure, although not one deserving of humiliation. But the avoidance of future unwanted pregnancies is a major concern, and so the counselor must determine how it was that the patient came to be pregnant at this particular time, and whether she is adequately protected against repeated abortion-seeking behavior. Was it a contraceptive failure? A misunderstanding of the "safe" period? Taking a chance? Trying to catch a man? Punishing herself or someone else? Overcoming a fear of infertility? The reasons are numerous and often complex. The counselor, who must be as knowledgeable about contraception as she is skilled in interviewing, will be in a position to offer sensible advice when she understands the gamut of these reasons, and not before.

Finally, the counselor sees her role with the client as that of a crisis intervention. Psychiatrists interested in prevention[11,12] have pointed out the need for timely, skilled intervention when people are vulnerable to changes for better or for worse. By definition, a crisis is a time when this vulnerability is greater, and relatively little intervention may have a great impact. Ask women who have had unsavory illegal abortions how hard it is to forget; compare women who have had safe, humane procedures and see it as a benign and maturing experience. The counselor may help the woman to discover that the unwanted pregnancy reflects a self-defeating pattern of behavior. The client may take this opportunity to review her important relationships, her marriage, her children, the man involved, her parents. When further counseling, casework, or psychotherapy is deemed appropriate, referral is made. The client is not cut off from the counselor arbitrarily, and may call for advice or even a return visit for follow-up counseling.

Selection of counselors is more an art than science at this stage in the evaluation of counseling models. A good counselor must be capable of forming relationships quickly without overpowering or becoming too possessive of the clients. She must be objective and yet supportive, able to hear and appreciate life styles sometimes very different from her own, and be able to relate easily with physicians, nurses, and social workers. Counselors must be able to deal with mothers, fathers, husbands, and lovers. In a recent study of counselor-training and effectiveness[13] the following characteristics were listed as the essentials, gleaned from the experience of many experts and many schools of thought: accurate empathy, authenticity or genuineness, and non-possessive warmth. These are the goals in choosing and training counselors.

There is a growing importance of the role of nonprofessionals in medical practice, and the PRETERM experience supports this trend. Recently a number of programs have been developed using persons with aptitude to work with emotionally ill patients. The abortion counselor should be an adjunct to preventive psychiatry. Her role is part educational and part exploratory in the psychodynamic sense; she is not a surrogate psychiatrist but can be something much more. The hour spent in abortion-counseling can be infinitely more valuable than that spent with a psychiatrist under conditions of duress due to medicolegal 'buck-passing'. The initial patient and physician response to this counseling model at PRETERM has been auspicious and gratifying.

## Summary and Conclusion

Medical and legal opinion in the United States is approaching societal consensus that safe, inexpensive, expeditious, and compassionate abortion services must be established as a 'backup' to contraception.

Physicians may appropriately delegate most of the responsibility of social and emotional counseling to trained paraprofessionals. Within our culture, the core of such counseling may include the full discussion of alternatives to abortion, evaluation of abortion as an appropriate choice for the individual and her family, a detailed explanation of the medical procedures with on-going psychologic support during the abortion, contraceptive education and choice, and an exploration of attitudes toward abortion and sexuality.

Vacuum aspiration abortion before 12 weeks from the last menstrual period of pregnancy is a safe and simple outpatient procedure with effective local anesthesia facilitated by adequate counseling.

It is reasonable to incorporate these procedures in a full-scale professional pregnancy termination facility (PRETERM), meeting strict medical criteria and demonstrating that safe and compassionate services can be provided inexpensively and expeditiously.

The "alternative abortion", done early, medically safe, on an outpatient basis, inexpensively, with appropriate counseling and with only local anesthesia, by a physician who is aware and responsive to the psychological state of the unhappily pregnant woman, is non-traumatic and is beneficial to the woman's physical, emotional and social health.

## References

1. Amer. J. Public Health, 1969, 59, 151.
2. Amer. J. Public Health, 1971, 61, 479.
3. J.A.M.A., 1970, 213, 3, 359.
4. Standards for Obstetric-Gynecologic Hospital Services, Chicago: American College of Obstetricians and Gynecologists, 1969, 52.
5. TYLER, CARL AND SCHNEIDER IAN: Amer. J. Public Health, 1971, 61, 497.
6. PAKTER, JEAN: At the American Population Association Meeting, April 23, 1971.
7. The Population Council, First Report, Joint Report for the Study of Abortion, March 1971.
8. STEWART, G.U. AND GOLDSTEIN, P.G.: Obstet. Gynec., 1971, 37, 4, 510.
9. WALTER, G.S.: Obstet. Gynec., 1970, 36, 483.
10. The Right to Abortion: A Psychiatric View. New York: Group for the Advancement of Psychiatry, 1969.
11. LINDEMANN, ERICH: Amer. J. Psychiat., 1944, 101, 141.
12. CAPLAN, GERALD: Principles of Preventive Psychiatry. New York: Basic Books, 1964.
13. TRAUX, C. B., AND CHARKHUFF, R. R.: Toward Effective Counseling and Psychotherapy. Chicago: Aldine, 1967.

# Free Thyroxine Indices

IRA D. GODWIN, M.D.*, C. BARRIE COOK, M.D.†, AND
JIMMY BAILEY, M.S.‡

MOST OF THE thyroxine (T4) synthesized by the thyroid gland circulates in the body bound to thyroxine-binding proteins with less than 0.1% being in the free form. It is now generally agreed that it is the free thyroxine that influences the metabolism of the individual cells of the body and therefore reflects the true status of the thyroid gland. Several methods for measuring free thyroxine have been developed, but none of them is easily adapted for routine use in the clinical laboratory.

Because determination of the free thyroxine concentration is technically very difficult, numerous efforts have been made to measure thyroid function in other ways. In the absence of protein abnormalities, tests that measure plasma thyroxine levels and triiodothyronine uptake (T3 tests) are usually reliable indices of thyroid function. Unfortunately, both the plasma thyroxine tests and the T3 tests are affected by conditions that cause variations in the level of the thyroxine-binding proteins or by interference with their actions. Also the organic iodine compounds affect most of the procedures that measure the plasma thyroxine level.

The methods for measuring the plasma thyroxine level include the protein bound iodine (PBI), butanol-extractable iodine (BEI), T4 by column, and T4 by resin-sponge uptake. The organic iodine compounds affect the PBI determination and to a lesser extent the BEI and column chromatography procedures for T4. Godwin and Swoope[1] have shown that the total T4 by $^{125}$I resin-sponge uptake is superior to the measurement of the PBI in that it is not affected by inorganic or organic iodine compounds. The T4 by $^{125}$I resin-sponge uptake should be superior to the BEI and T4 by column for the same reason. The T4 by $^{125}$I resin-sponge uptake is a modification of the Murphy-Pattee method.[2]

Several T3 methods are available. These include methods using red blood cells, resin particles, resin sponge, and charcoal. T3 tests are not affected by organic or inorganic iodine compounds.

Clark and Horn[3], Goolden et al,[4] and Anderson[5] have developed free thyroxine indices. Each measured the patient's PBI and T3 levels and derived their indices from the obtained values. The $^{131}$I resin-sponge uptake procedure was the method utilized in determining T3 values in each of these instances.

Clark and Horn[3] compared the diagnostic accuracy of the PBI, T3, and "free thyroxine" index. Their "free thyroxine" index is derived by dividing the patient's T3 value by the T3 value of a control pooled serum and multiplying this ratio by the patient's PBI value. Their 95% confidence limits for the normal range for the "free thyroxine" index included all of the 23 tested pregnant patients and 4 nephrotic patients.

Goolden et al[4] named their free thyroxine index the free thyroxine factor. They found no significant difference between the free-thyroxine factor means of their 62 normal patients and 31 pregnant patients. The mean free-thyroxine factor value for 65 patients taking ovulen was slightly higher and considered to be probably significant. When Goolden and his co-workers utilized the "free thyroxine" index of Clark and Horn the difference between the means of the normal and pregnant groups was considered to be probably significant, and the difference between the means of the normal and ovulen groups was considered to be highly significant. Both the "free thyroxine" index and the free thyroxine factor showed better correlation with the thyroid status than either a PBI or T3 independently.

Anderson[5] found a good correlation between the free thyroxine concentration as measured by an equilibrium dialysis procedure and the PBI-RT3 product (his free thyroxine index) in normal patients, patients with hypothyroidism and hyperthyroidism, and chronically ill euthyroid patients as well as in pregnant patients and those taking estrogen. In acutely ill euthyroid patients the PBI-RT3 product closely reflected the state of thyroid function, whereas the free thyroxine concentration often exceeded the normal range. The PBI-RT3 product in pregnant women was slightly lower than normal. Anderson referred to the T3 test as RT3.

---

* Director of Laboratories, Northern Virginia Pathology Laboratories, Fairfax Virginia, and Associate Director of Laboratories, Fairfax Hospital, Falls Church, Virginia.

† Director of Laboratories, Fairfax Hospital, Falls Church, Virginia, and Associate Director of Laboratories, Northern Virginia Pathology Laboratories, Fairfax, Virginia.

‡ Clinical Chemist, Northern Virginia Pathology Laboratories, Fairfax, Virginia.

In the present work the T4 by $^{125}$I resin-sponge uptake as well as the T3 by $^{125}$I resin-sponge uptake was measured and the necessary mathematical calculations performed to determine a modified PBI-RT3 product of Anderson and the free thyroxine factor of Goolden et al. The results were then evaluated to determine which of these 2 free thyroxine indices was the more valid in patients who have abnormalities of thyroxine-binding proteins due to pregnancy and the ingestion of birth control pills.

## Methods

T4 $^{125}$I resin-sponge uptake (Tetrasorb*) was used according to the manufacturers instructions. T3 $^{125}$I resin-sponge uptake (Triosorb*) was used according to the manufacturers instructions.

T4-RT3 Product: The test T3 values were divided by the mean normal value for T3 to obtain the RT3 ratio. Anderson multiplied the RT3 ratio by the PBI value to obtain the PBI-RT3 product. In the present study we substituted our T4 value for the PBI values of Anderson and used the following formula:

T4-RT3 Product

$$= \text{T4 (mcg. \%)} \times \frac{\text{\%T3 uptake}}{\text{\%T3 uptake normal mean}}$$

The free thyroxine factor was calculated according to Goolden et al[2] substituting the T4 I$^{125}$ resin-sponge uptake value for the PBI X 1.53. The method of calculation was as follows:

$$\text{FTF} = \frac{\text{T4 (mcg.\%)}}{\dfrac{1090}{\text{\%T3 uptake} + 3.5} - 15.75}$$

## Results

Blood samples were obtained from the following groups: 1) 53 healthy male and female volunteers (laboratory personnel and blood bank donors), 2) 100 pregnant women with 5 from each week of gestation between the 21st and 40th weeks, 3) 20 women taking oral contraceptives, 4) 38 patients definitely hypothyroid, and 5) 34 patients definitely hyperthyroid.

As shown in figure 1, this T4 method is quite reliable in delineating both hypothyroidism and hyperthyroidism insofar as the normal population is concerned. However, all patients taking birth control pills and 98% of the pregnant subjects had T4 values above the upper limits of normal.

In figure 2 the T3 resin-sponge uptake is shown to be only fair in separating hypothyroid patients from euthyroid ones but was considerably better in identifying hyperthyroid patients. Here, all patients

---

* Tetrasorb and Triosorb are both trade names of the Abbott Radiopharmaceuticals, North Chicago, Illinois.

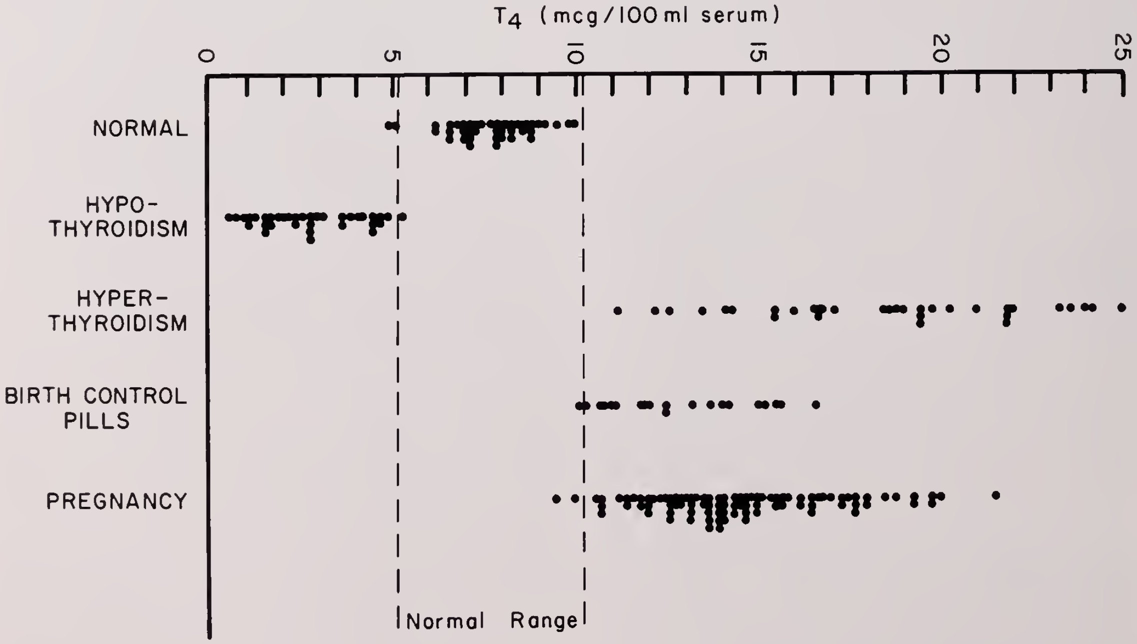


FIG. 1. Values for total thyroxine, in mcg/100 ml of serum, in normal euthyroid, hypothyroid and hyperthyroid patients, also in patients taking birth-control pills and in pregnant patients.

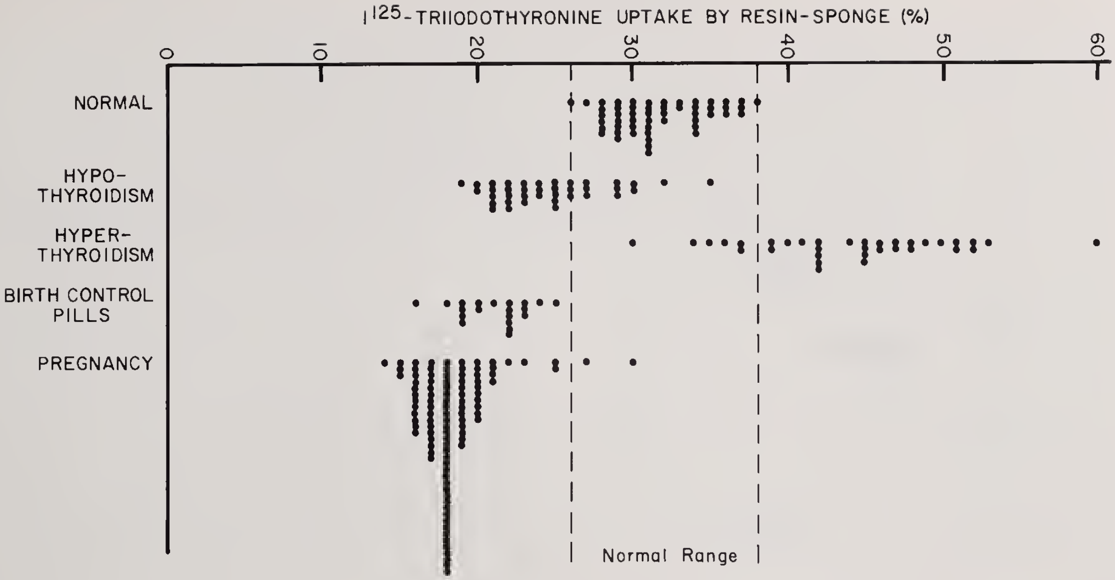


**FIG. 2. Values for the resin uptake of triiodothyronine $I^{125}$ of serum in normal euthyroid, hypothyroid and hyperthyroid patients, and in patients taking birth-control pills and in pregnant patients.**

taking birth control pills were below normal limits and 98% of the pregnant patients had values below the normal limits.

Figure 3 demonstrates that the T4-RT3 product is very good in identifying hypothyroid and hyperthyroid patient's when compared with figures 1 and 2 it is noted to be equal to the T4 and superior to the T3 for this purpose. Also, the T4-RT3 product is a much better index of the thyroid status in the patients taking birth control pills and the pregnant ones than the T4 or T3 alone.

Figure 4 shows that the free thyroxine factor is also very good for identifying hyperthyroid patients but perhaps not quite as good for identifying hypothyroid ones. When compared with figure 3 it appears to be even better than the T4-RT3 product in pregnant patients and women taking birth control pills.

In table 1 are tabulated the mean ± S.D. and actual range of all the thyroid function tests for the various groups. The standard deviation for the free thyroxine factor in the hyperthyroid group was so great because 1 patient had a free thyroxine factor of 17.667. If this value is excluded, the mean ± S.D. is 2.858 + 1.505 with an actual range of .923 – 6.662.

## Discussion

This study demonstrates that these 2 free thyroxine indices are clinically useful in those conditions with altered levels of thyroxine-binding proteins because most of the values fall within the normal range. Either the T4-RT3 product or the free thyroxine factor is a better index of thyroid function in pregnant patients and in patients taking birth control pills than the T4 or T3 alone. The free thyroxine factor is slightly superior to the T4-RT3 product in those patients with abnormal levels of thyroxine-binding proteins. These 2 indices are of approximately equal validity in patients with overactive thyroid glands, with a T4-RT3 product perhaps a little more accurate in detecting patients with under-active thyroid glands. The T4-RT3 product is simple to calculate, and the calculations can be made on a calculator or on a slide rule. The free thyroxine factor is a much more involved calculation, for which we have utilized a desk-top computer, the Olivetti-Underwood Programma[101].

## Summary

The T4 and T3 were determined by $^{125}I$ resin-sponge uptake methods on euthyroid patients, hypothyroid patients, pregnant women, and women taking birth-control pills. The free thyroxine factor of Goolden et al, and the T4-RT3 product, a modification of Anderson's PBI-RT3 product, were calculated from the T4 and T3 test values. The T4 and both free thyroxine indices were very good in determining hyperthyroidism and hypothyroidism and superior to the T3 test. Both free thyroxine indices (free thyroxine factor and T4-RT3 product) were superior to the T4 or T3 test alone in those subjects with altered thyroxine-binding proteins due to pregnancy or to the ingestion of birth-control pills. The free thyroxine factor was the slightly superior index of thyroid status in those groups with altered thyroxine-binding protein levels.

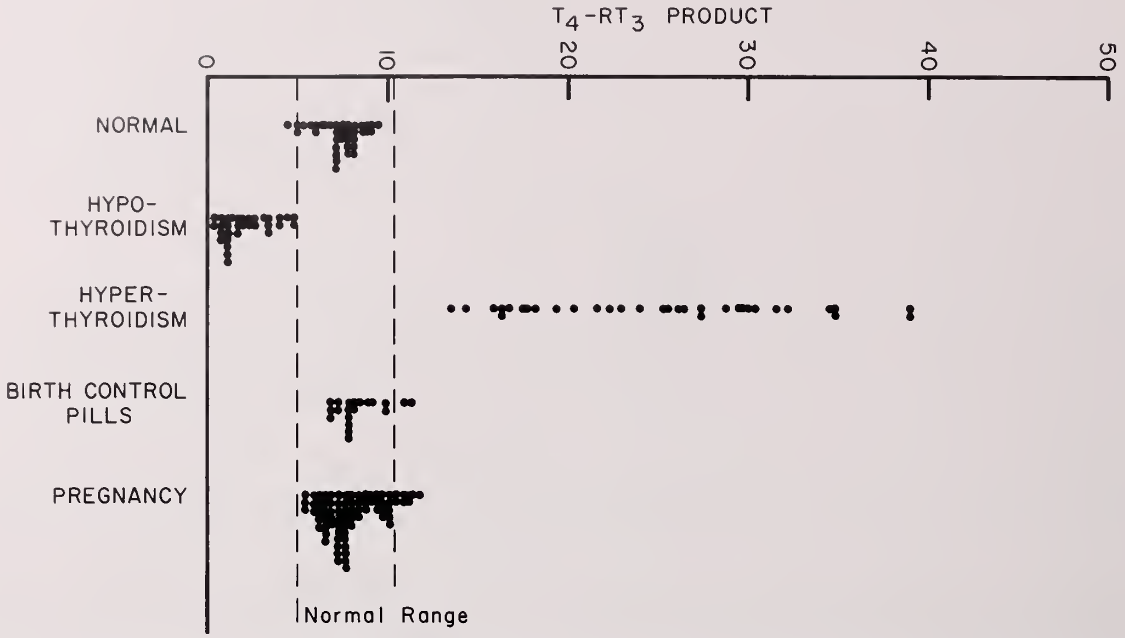


FIG. 3. Values for the T4–RT3 product (arbitrary units) in normal euthyroid, hypothyroid and hyperthyroid patients, in patients taking birth-control pills and in pregnant patients.

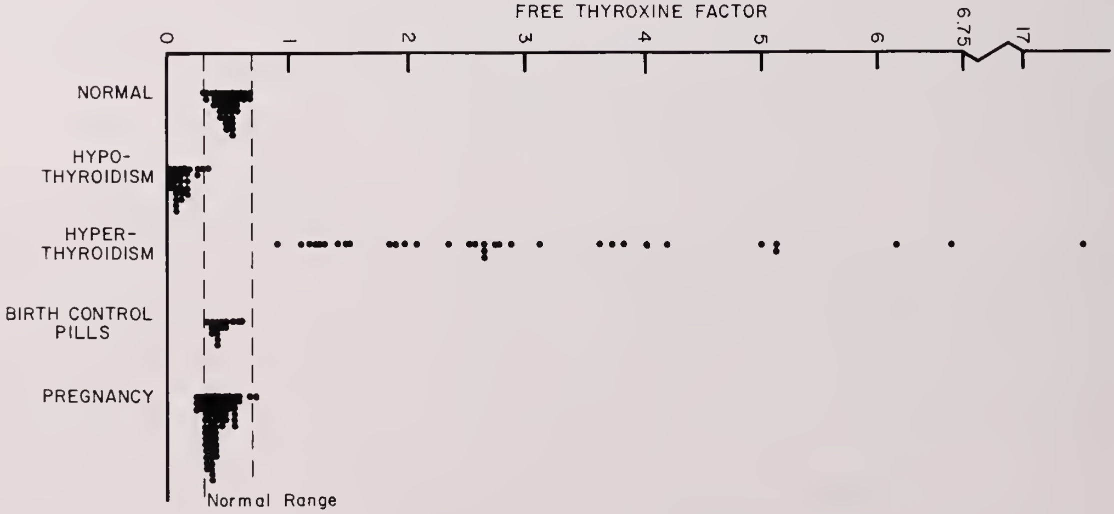


FIG. 4. Values for the free thyroxine factor (arbitrary units) in normal euthyroid, hypothyroid and hyperthyroid patients, in patients taking birth-control pills, and in pregnant patients.

TABLE 1: Free Thyroxine Indices

| Group | Number of Patients | T4 mcg/100 ml. | RT3 % | T4-RT3 Product | Free Thyroxine Factor |
|---|---|---|---|---|---|
| | | mean S.D. (actual range) | mean S.D. (actual range) | mean S.D. (actual range) | mean S.D. (actual range) |
| Normals | 53 | 7.7 ± 1.25 | 31.7 ± 2.99 | 7.6 ± 1.30 | .509 ± .1079 |
| | | (4.4 – 11.4) | (26 – 38) | (4.5 – 12.5) | (2.92 – .907) |
| Hypothyroid | 38 | 2.8 ± 1.38) | 24.7 ± 3.63 | 2.2 ± 1.30 | .123 ± .0867 |
| | | (0.6 – 5.3) | (19 – 35) | (0.4 – 4.9) | (.026 – .358) |
| Hyperthyroid | 34 | 18.5 ± 3.68 | 44.2 ± 6.32 | 25.9 ± 8.04 | 3.294 ± 2.9408 |
| | | (11.2 – 25.0) | (30 – 60) | (14.5 – 47.0) | (.923 – 17.667) |
| Birth Control Pills | 20 | 12.9 ± 1.98 | 21.1 ± 2.23 | 8.5 ± 1.27 | .449 ± .0728 |
| | | (10.1 – 16.6) | (16 – 25) | (7.0 – 11.4) | (.358 – .614) |
| Pregnant | 100 | 14.4 ± 2.44 | 18.4 ± 2.34 | 8.2 ± 1.50 | .424 ± .0883 |
| | | (9.5 – 21.5) | (14 – 30) | (5.6 – 11.9) | (2.83 – .739) |

Values (mean ± S.D. and actual range) for thyroid function tests in various groups of patients.

## References

1. GODWIN, I.D. and SWOOPE, H.B.: Comparison of a T4 resin sponge uptake method with a protein-bound iodine procedure. Amer. J. Clin. Path., 1968, 50, 194.
2. MURPHY, B. E. P., and PATTEE, C. J.: Determination of thyroxine utilizing the property of protein-binding. J. Clin. Endocr., 1964, 24, 187.
3. CLARK, F., and HORN, D. B.: Assessment of thyroid function by the combined use of the serum protein bound iodine and resin uptake of $^{131}$I triiodothyronine. J. Clin. Endocr., 1965, 25, 39.
4. GOOLDEN, A. W. G., GARTSIDE, J. M. and SANDERSON, C.: Thyroid states in pregnancy and in women taking oral contraceptives. Lancet, 1967, 1, 12.
5. ANDERSON, B. G.: Free thyroxine in serum in relation to thyroid function. J. A. M. A., 1968, 203, 577.

# Gradual Progression of First Degree Atrioventricular Block to Complete Atrioventricular Block in Childhood*

LCDR WALTER V. R. VIEWEG, MC, USN, CDR RONALD A. PROULX, MC, USN,
AND LCDR GERALD A. WOLFF, MC, USNR

THE GRADUAL PROGRESSION of first degree atrioventricular (A-V) block to complete A-V block in childhood has not been extensively described. This case describes such a progression over the course of several years in a pediatric patient without evidence of associated congenital or acquired organic heart disease.

## Report of Case

V.A., a 14-year-old girl, was the product of a normal gestation and delivery. Birth weight was 6 pounds and 13 ounces. Physical examination was normal except for slight jaundice. Specifically, no heart murmur was heard.

An electrocardiogram was first recorded at 6 months (fig. 1) because of a grade II/VI systolic murmur best heard at the left sternal border. The murmur was considered functional. The P-R interval was 0.15 seconds. Electrocardiograms were recorded at 8 months, 15 months, 18 months, 24 months (fig. 2), and 29 months with P-R intervals of 0.16, 0.19, 0.19, 0.20, and 0.20 seconds, respectively. Other than progressively lengthening P-R intervals, the electrocardiograms were normal.

The P-R interval had lengthened to 0.28 seconds by 5 years. A right-heart catheterization was performed and demonstrated normal oxygen saturations and pressure measurements in the right heart. At 7 years the P-R interval was 0.33 seconds (fig. 3). First degree A-V block was noted during annual visits to the pediatric cardiology clinic at 8 and 9 years.

We first evaluated the patient when she was 14 years old. She was asymptomatic and participating in intramural track events. She was a well-developed adolescent Caucasian girl. The height was 63 inches, the weight 103 lbs. The pulse was regular at 50 beats/minute, and the blood pressure was 120/70 mmHg. Physical findings included occasional cannon "a" waves in the jugular venous pulse; variation in the intensity of the first heart sound; a second heart sound of normal intensity with normal respiratory variation; and a grade II/VI ejection murmur, loudest at the second intercostal space along the left sternal border. There were no associated ejection clicks. The electrocardiogram confirmed complete A-V block with an atrial rate of 60-85 beats/minute and a perfectly regular junctional pacemaker with a rate of 45 beats/minute (fig. 4). Roentgenologic examination was normal (fig. 5).

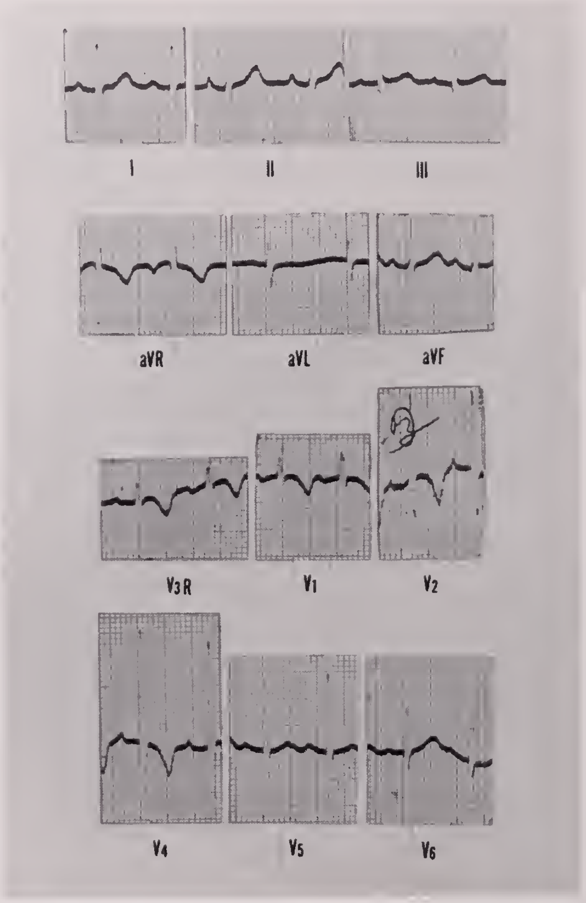


FIG. 1. Electrocardiogram at 6 months. The tracing is normal except for a P-R interval of 0.15 seconds.

---

* From the Department of Medicine, Naval Hospital, Oakland, California 94627. The opinions or assertions contained herein are those of the authors and are not to be construed as official or necessarily reflecting the views of the Medical Department of the Navy or the Naval Service at large.

Reprint requests to LCDR W. V. R. Vieweg, MC, USN, Cardiology Branch, Naval Hospital, National Naval Medical Center, Bethesda, Maryland 20014.

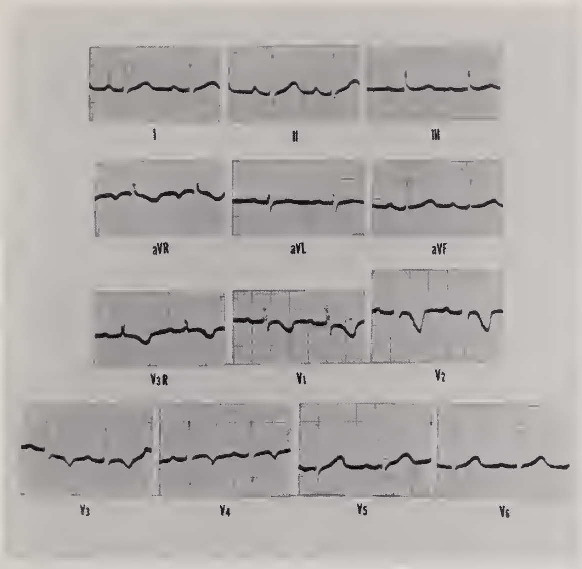


**FIG. 2. Electrocardiogram at 24 months. The tracing is normal except for a P-R interval of 0.20 seconds.**

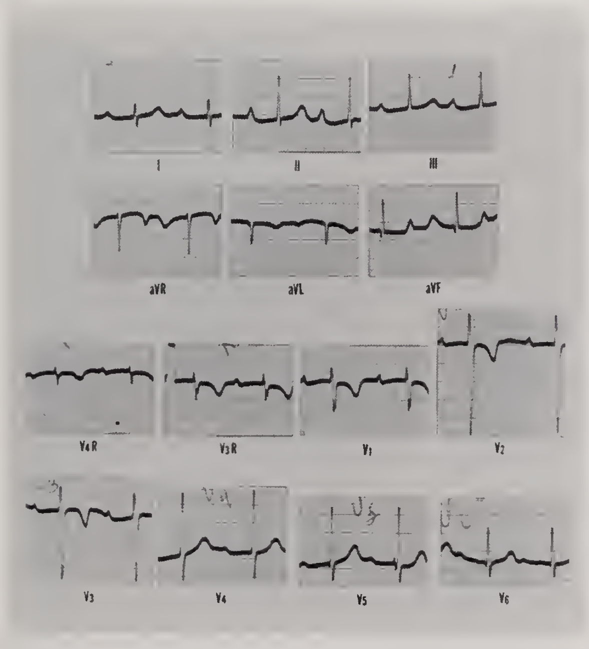


**FIG. 3. Electrocardiogram at 7 years. The tracing clearly demonstrates first degree A-V block with a P-R interval of 0.33 seconds.**

## Discussion

Congenital complete A-V block may be present without any other cardiac abnormality[1] or may co-exist with numerous cardiac defects, including endocardial fibro-elastosis, patent ductus arteriosus, corrected transposition of the great vessels, secundum atrial septal defect, ventricular septal defect with pulmonic stenosis or transposition of the great vessels,[2] coarctation of the aorta, ventricular septal defect,[3] tetralogy of Fallot, situs inversus, Eisenmenger's complex, tricuspid atresia,[4] primum atrial septal defect,[5] persistent atrioventricular canal,[6] aneurysm of the membranous portion of the ventricular septum,[7] hypoplastic left ventricle,[8] cor triloculare,[9] and Marfan's syndrome.[10] Acquired complete A-V block occurring during childhood has been associated with numerous infectious states and inflammatory processes and has followed cardiac surgery and trauma.[11] Partial A-V block has been demonstrated in childhood but has been seen much less frequently than complete A-V block.[12] It can be congenital or acquired, and may or may not have associated cardiac lesions.[13]

V.A. was found to have complete A-V block at the age 14 years (fig. 4). Other than evidence of complete A-V block, physical examination, electrocardiogram, and roentgenologic examination (fig. 5) were normal. The systolic murmur was considered functional by all observers. Associated corrected transposition was considered unlikely because of normal Q-wave orientation, a normal roentgenologic examination, and a normal second heart sound. Angiography required to exclude this remote possibility could not be justified. The slowly progressive lengthening of the P-R interval between 6 months and 9 years, without associated clinical or electrocardiographic evidence of myocardial disease, argued strongly against an inflammatory process causing the progressive A-V block in this patient.

The electrocardiogram with complete A-V block showed a QRS complex of normal configuration and duration consistent with a pacemaker in the A-V junctional tissue. The ventricular rate at rest was greater than 40 beats/minute. Furthermore, after graded exercise, the ventricular rate increased to greater than 100 beats/minute (fig. 6). These features characterize congenital complete A-V block and provide sharp contrast to those cases of acquired complete A-V block wherein the pacemaker is idioventricular with a widened QRS complex, a slower heart rate, and less capacity to accelerate.

According to Ayers et al,[14] pediatric patients with congenital complete A-V block generally have an excellent prognosis, determined primarily by any associated cardiac defects rather than the rhythm disturbance itself. Campbell followed 6 patients with complete A-V block for 34 to 40 years with only 1 having had an Adams-Stokes attack. In contrast, pediatric patients with acquired complete A-V block have a poor prognosis because of frequent Adams-Stokes attacks, which are often fatal.

The patient probably would have been given the diagnosis of congenital complete A-V block at 14 years of age if previous electrocardiograms had not

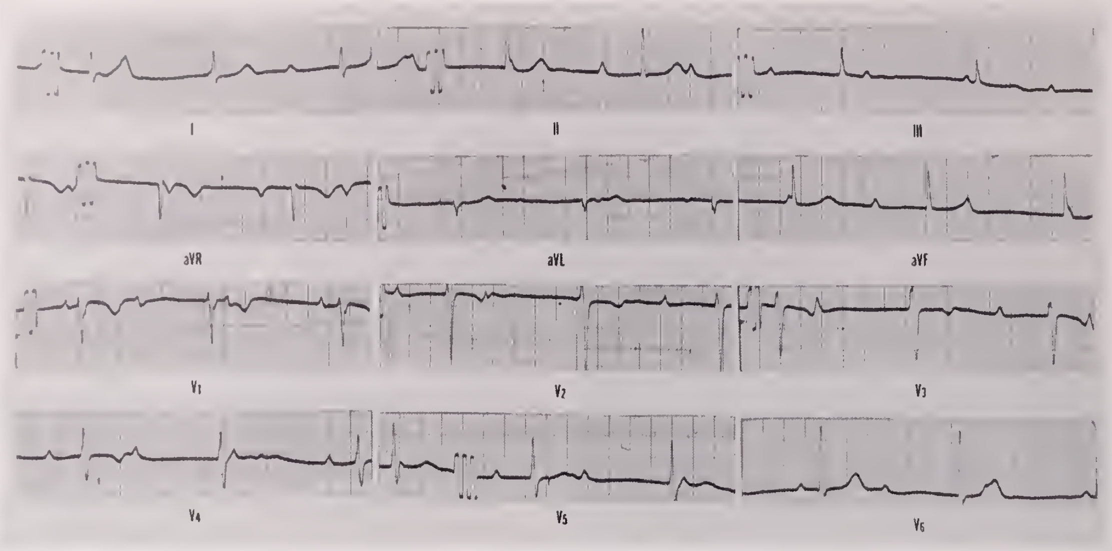


**FIG. 4.** Electrocardiogram at 14 years. The tracing shows complete A-V block with an atrial rate of 60-85 beats/minute and a perfectly regular junctional pacemaker with a rate of 45 beats/minute.

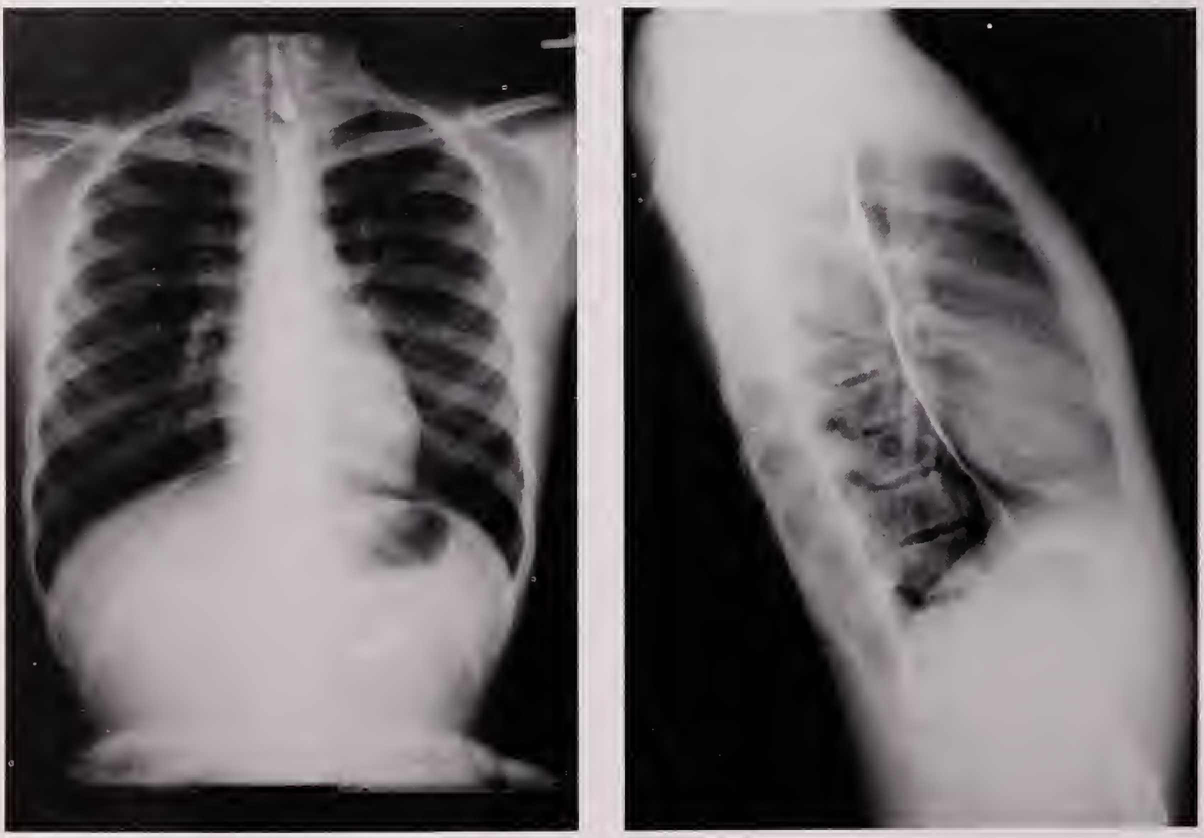


**FIG. 5.** Normal roentgenologic examination at 14 years.

been available. However, her prognosis is probably that of congenital rather than acquired complete A-V block because of her benign course and ability to accelerate the heart rate with exercise. Thus, in describing the natural history of what is generally classified as congenital complete A-V block, perhaps one should include those patients, like ours, who first manifest this block long after birth.

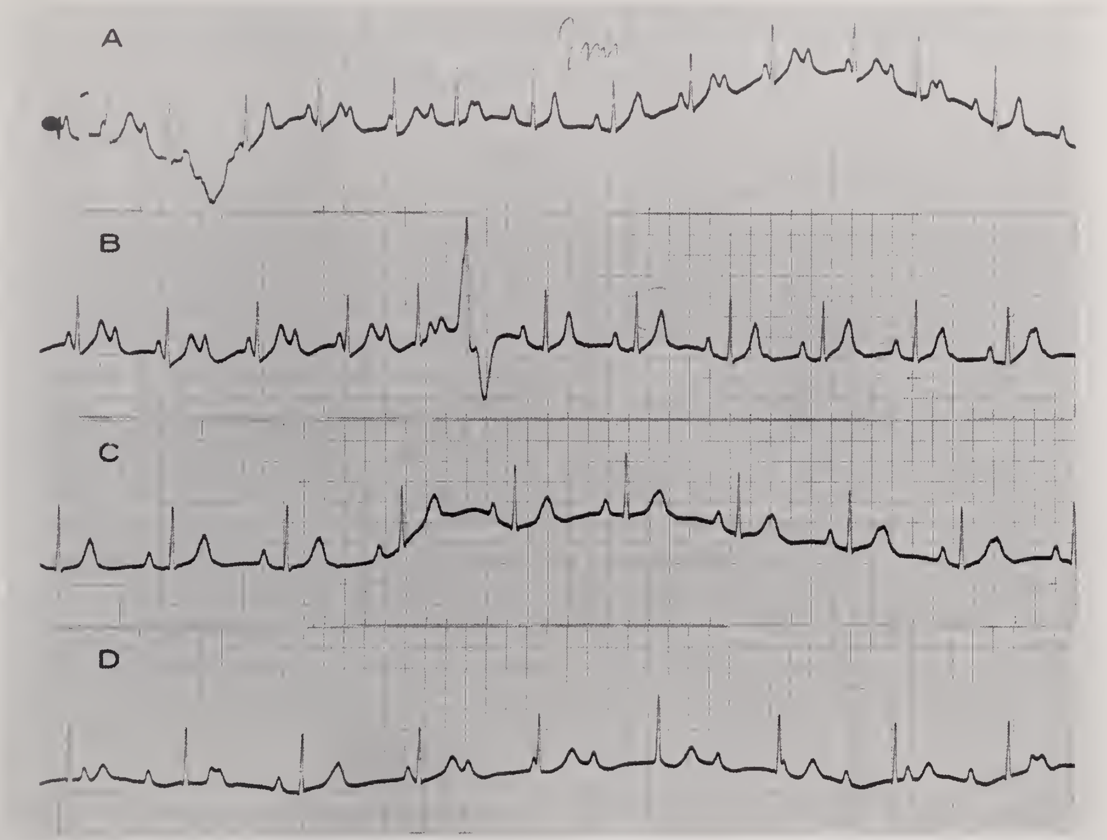


**FIG. 6. Serial electrocardiographic tracings following graded exercise at 14 years. Immediately after graded exercise the ventricular rate exceeded 100 beats/minute. The ventricular rate returned to pre-exercise values during the ensuing 10 minutes (A, immediately post-exercise; B, 1 minute; C, 2 minutes; and D, 10 minutes post-exercise). Variable configuration of T wave is due to fortuitous superimposition of P wave as the patient remained in complete A-V block during period of exercise and recovery.**

## Summary

A patient is described who progressed slowly from first degree atrioventricular (A-V) block to complete A-V block in childhood without any other cardiac abnormality. Even though the complete A-V block was acquired, the benign course and the ability to accelerate the heart rate with exercise imply a prognosis comparable to that of congenital complete A-V block. It is presumed from this case that some patients seen for the first time as adolescents or young adults and thought to have congenital complete A-V block may actually have acquired the complete A-V block long after birth.

## Acknowledgment

The authors wish to express their appreciation to Doctor Saul J. Robinson for his corroboration of the physical findings in this patient and for his thoughtful review of the manuscript.

## References

1. CAMPBELL, M. AND EMANUEL, R.: Brit. Heart J., 1967, 29, 577.
2. NAKAMURA, F. F. AND NADAS, A. S.: New Eng. J. Med., 1964, 270, 1261.
3. KANGOS, J. J., GRIFFITHS, S. P. AND BLUMENTHAL, S.: Amer. J. Cardiol., 1967, 20, 632.
4. CAMPBELL, M. AND THORNE, M. G.: Brit. Heart J., 1956, 18, 90.
5. WALLGREN, A. AND WINBLAD, S.: Acta Paediat., 1937, 20, 175.
6. EYTON-JONES, J.: Brit. Med. J., 1960, 2, 275.
7. CLARK, R. H. AND WHITE, P. D.: Circulation, 1952, 5, 725.
8. DONOSO, E., BRAUNWALD, E., JICK, S., ET AL: Amer. J. Med., 1956, 20, 869.
9. HOEKENGA, M. T.: Amer. J. Dis. Child., 1945, 69, 231.
10. BAWA, Y. S., GUPTA, P. D. AND GOEL, B. G.: Brit. Heart J., 1964, 26, 148.
11. BELLET, S.: Clinical Disorders of the Heart Beat, 2nd edition. Philadelphia: Lea and Febiger, 1963, 342.
12. POTTER, C. T. AND TROUNCE, D. Q.: Brit. Heart J., 1952, 14, 291.
13. WRIGHT, F. S., ADAMS, P., JR., AND ANDERSON, R. C.: Amer. J. Dis. Child., 1959, 98, 72.
14. AYERS, C. R., BOINEAU, J. P. AND SPACH, M. S.: Amer. Heart J., 1966, 72, 381.

# Clinicopathologic Conference: Leukemia or Leukemoid Reaction?

CHANDLER SMITH, M.D.*

The following case report was presented for discussion at the biweekly Clinicopathologic Conference held at The George Washington University Hospital, April 21, 1970.

The patient was a white woman 53 years old who was well until 4 years before her hospital admission when a nodule was noted in her right breast. Biopsy revealed carcinoma, a radical mastectomy was performed, and metastatic tumor was found in the axillary lymph nodes. Cobalt irradiation was given. The patient felt well for the following 2 years when abdominal pain developed. Laparotomy was thought to reveal carcinoma of the peritoneum although no biopsy was taken. A course of 5-Fluorouracil was given, symptoms subsided, and the patient was discharged. One month before the final admission the patient complained of pain in the abdomen that was associated with confusion, lassitude, and a tendency to fall. The pain was not localized and was moderate in severity.

The patient's mother had been treated for carcinoma of the breast. Her father had died of leukemia.

Physical examination revealed a well-developed, chronically ill, white woman in no acute distress. The temperature was 99° F., respiratory rate 20, pulse rate 120, and blood pressure 190/100 mm Hg. The right breast was absent. Nodules measuring up to 1 cm in diameter were present in the skin of the chest, back, and abdomen. Small lymph nodes were palpated in the neck. The lung fields were clear to auscultation. The heart was normal. The abdomen was moderately tender, a mass was palpated in the left upper quadrant, and the liver edge was felt 10 cm below the right costal margin. Bowel sounds were normal. There was an expressive aphasia, the deep tendon reflexes were hyperactive, and the Babinski reflex was positive on both sides.

The hemoglobin was 13.6 Gm, the hematocrit was 42, and the leukocytes numbered 25,100 with 46 segmented granulocytes, 11 band cells, 3 juvenile cells, 3 myelocytes, 3 progranulocytes, 16 blast cells, 15 lymphocytes, and 3 monocytes. There were also 26 nucleated erythrocytes per 100 leukocytes. A serologic test for syphilis was nonreactive.

The blood calcium and phosphorus were 15 and 4.3 mg per 100 ml. The blood sugar and urea nitrogen were 94 and 40 mg per 100 ml. The serum alkaline phosphatase was 6.0 units (0-4). The blood uric acid was 16.6 mg, the serum glutamic transaminase was 163 units (5-40), and the serum lactic dehydrogenase was 3,840 units (under 550). The serum bilirubin was normal. The total serum protein was 7.9 Gm with 4.5 Gm albumin and 2.4 Gm globulin. A bone survey revealed changes in the skull and pelvis that were consistent with metastatic disease.

On the 4th hospital day the cerebrospinal fluid was bloody with a protein of 80 mg (15-45), and sugar of 90 mg (40-70). No tumor cells were seen. A photoscan of the brain was consistent with metastatic disease of cerebral tissue and calvarium on the left. An electroencephalogram was abnormal with a "bi-frontal focus."

On the 5th day the stool was guaiac-positive, the prothrombin time was 14 sec. (control 13 sec.), and the platelets numbered 98,000 per cmm. The bleeding time was 11 min. The hemoglobin was 11.7 Gm, hematocrit 36, and leukocyte count 23,900 with 36 segmented granulocytes, 8 band cells, 2 juvenile cells, 3 myelocytes, 14 blast cells, 33 lymphocytes, and 4 monocytes. Anisocytosis of erythrocytes was pronounced.

The patient's condition continued to worsen. She bled per rectum and vomited blood. Transfusions were given, dehydration increased, and azotemia became pronounced. The leukocyte count was 27,200 with 19 segmented granulocytes, 12 band cells, 2 juvenile cells, 3 myelocytes, and 43 blast cells. The patient lapsed into coma, the temperature rose to 103° F., and death occurred on the 15th hospital day.

## Clinical Discussion

Dr. Jensen†: The patient obviously had carcinoma; there were known metastases, if not to the peritoneum and bones, certainly to the skin. Our problem is first to decide whether this was the total disease, or if others were present, and if it were the only disease, the mechanisms of the illness and death.

Young patients, statistically, have 1 disease, and in a given illness one is well advised to seek explanations for symptoms and findings on the basis of a single disease. In older patients this is not true since multiple disorders are common. In this patient, who does not clearly fall into the young or old categories, I shall attempt to assign the total picture to the disease which we are certain is present.

---

*Professor of Pathology, The George Washington University School of Medicine, 1335 H Street, N.W., Washington, D.C. 20005.

† Dr. Wallace N. Jensen, Professor and Chairman, Department of Medicine, The George Washington University School of Medicine.

Before dismissal of the possibility that the patient had leukemia, let us briefly note that the patient was without hemotologic abnormality until late in the course of the disease. The only type of leukemia suggested by the findings of immature granulocytes and nucleated red blood cells together with a 16 to 40 per cent blast-cell count is acute myeloblastic leukemia. Therefore, only acute myeloblastic leukemia is a diagnostic possibility here.

In adults there is virtually no cytologic or morphologic way to distinguish acute myeloblastic leukemia from the so-called "leukemoid reaction" or the "leukoerythroblastic reaction." In abnormalities of this leukemic cell-type, including Auer's bodies, histocytology, electron microscopy, and chromosomal karyotypes fail to distinguish the 2 disorders. Clearly, the best evidence is obtained by correction of the underlying disorder causing the leukemoid reaction and then observing its disappearance. The most common causes of the leukoerythroblastic reaction are metastatic cancer, gram-negative bacteremia, trauma with bone-marrow embolism, necrotizing liver disease, and disseminated granulomatous disease, especially miliary tuberculosis. The most frequent cause of the leukemoid reaction in the female is cancer, and in carcinoma of the breast it is especially common. Lastly, I would point out that in this disorder one expects myelofibrosis, myelosclerosis, and extramedullary hemopoiesis.

The masses in the breast, the skin, the peritoneum and the bones are evidence of tumor metastasis. The hypercalcemia is also evidence that osteoblastic activity was increased. The exact mechanism by which tumor cells cause accelerated osteoblastic activity, or in other cases excess osteoclastic activity, is imprecisely known. The simplistic idea of pressure erosion of bone by tumor cells is not acceptable. Part of the evidence for this includes pressure measurements in bone. The hyperuricemia of 17 mg. per cent, the serum glutamic transaminase, and particularly the lactic acid dehydrogenase were elevated, and these are consistent with the suggestion of rapid synthesis and destruction of cells. The data do not differentiate between the types of cells, but the presumption may be made that both neoplastic and hemopoietic cells are contributory. The isoenzymes of lactic dehydrogenase might have given a suggestion as to the cells from which the enzyme was derived. Isoenzyme $LDH_1$ would most likely have been elevated. I propose that the patient had metastatic carcinoma, involving especially the bone marrow, and likely extramedullary hemopoiesis. The extramedullary hemopoiesis ordinarily takes place in the spleen, liver and lymph nodes, and not infrequently the renal and peri-renal structures are additional sites of this activity.

It would have been entirely possible to obtain more precise data with relative ease concerning metastasis and extramedullary hemopoiesis. Such procedures as a radiogram of the abdomen and an intravenous pyelogram would have been helpful. Also, an angiogram of the splenic artery would have likely identified the mass in the left upper quadrant of the abdomen. Most helpful, of course, would have been a bone-marrow biopsy. I would anticipate that marrow metastases would be found, that little sclerosis would be present, and that hemopoiesis would be conspicuous in both marrow and in extramedullary sites.

The patient had a relatively short hospital course, and the impression is gained that while the patient on admission was sick she was not desperately ill. She was described as not having acute distress, the hemoglobin was normal, and the total protein and A/G ratio were normal. In the last 15 days she had multiple untoward events leading to death.

Hemorrhagic spinal fluid was found, but the number of cells was not great and they could have been due to the withdrawal procedure. There is no cytologic method which clearly distinguishes between procedure-induced and disease-induced bloody spinal fluid. Metastatic tumors ordinarily do not give hemorrhagic fluid, and if the spinal fluid in this case is due to disease, then causes other than metastatic carcinoma must be considered. I shall assume it is procedure-induced.

The patient presented evidence of a generalized hemorrhagic diathesis. Although on the fifth day the prothrombin time was normal, there was a thrombopenia and an increased bleeding time. Assessment of the cause of bleeding is difficult, since changes in the patient were probably taking place in matters of hours, and laboratory observations could hardly keep pace with them. Furthermore, transfusions were given, and since we are not advised as to whether red blood cells, whole blood, fresh plasma, or plasma protein fractions were given, the cause of bleeding is not clear.

One earmark is present, however; the patient developed anisocytosis. Presumably this included fragmentation of erythrocytes. The combination of cell fragmentation, renal disease, cerebral disease, and a diffuse bleeding disorder requires that the possibility of intravascular coagulation and defibrination syndrome be considered. The landmarks of this syndrome have evolved especially well during the past 10 to 15 years, although the clinical descriptions were recorded much earlier by obstetricians. I believe the patient died of the intravascular coagulation syndrome.

### Clinical Diagnoses

Dr. Jensen: Widespread metastatic carcinoma of breast
Leukemoid reaction
Intravascular coagulation syndrome

### Pathology Discussion

Dr. Smith: Autopsy examination revealed widespread metastatic carcinoma that included liver, spleen, lymph nodes, and bone marrow. The liver weighed 2,400 Gm., and occasional tumor cells were identified, but their shape was grossly normal. On histologic examination, however, extramedullary hemopoiesis was pronounced and this was the conspicuous change. The spleen was more remarkable; it was firm, pale, globoid, and weighed 800 Gm. It accounted for the mass in the right upper quadrant of the abdomen. All fields were replaced with fibrous connective tissue in which tumor cells were abundant (figure 1). In view of the fact that metastatic carcinoma is infrequent in the spleen, the widespread distribution in this case is unusual. I have not seen it recorded that this is common in cases of leukemoid reaction, although it is evident in this instance that the spleen was not capable of significant hemopoiesis. The bone marrow was massively infiltrated with metastatic tumor (figure 2).

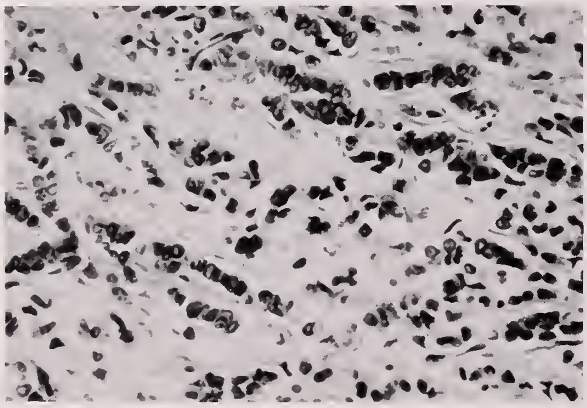


**Fig. 1. Metastatic carcinoma and diffuse fibrosis of the spleen.**

It is not possible from the autopsy examination to establish the diagnosis of leukemoid reaction; that is a clinical diagnosis. There are times, as Dr. Jensen has pointed out, when the distinction between leukemoid reaction and leukemia cannot be made. The high proportion of blast cells in the blood in this case made that distinction difficult, expecially in the early part of the illness. Although no test is absolute in this regard, the leukocyte alkaline phosphatase is useful in indicating the nature of the underlying process. Alkaline phosphatase is normally present in the cytoplasm of mature neutrophils.[1] It is increased in leukocytosis, including myeloid metaplasia and the leukemoid reaction, and it is greatly decreased in chronic granulocytic leukemia. Thus, in making this distinction it is very useful. Dr. Jensen has pointed out, however, that if this patient had leukemia, it would necessarily be the acute variety because of the high proportion of blast cells. In acute granulocytic leukemia the alkaline phosphatase reaction of the leukocytes may be useless because of insufficient mature neutrophils in the blood smear and on which the tinctorial observation must be made. Thus in this case the test has little relevance.

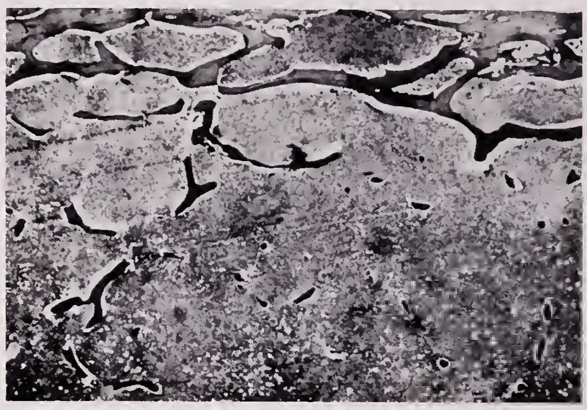


**Fig. 2. Bone marrow, showing massive tumor-cell replacement with focal destruction of bony trabeculae.**

Although it may be difficult, or at times impossible, to distinguish the leukemoid reaction from leukemia during the clinical illness of the patient, I would point out for the benefit of the students, that morphologic observations after death readily make this distinction. Leukemia is always attended by infiltration of reticulo-endothelial organs with leukocytes of various degrees of maturity and with obliteration of normal tissue pattern at those sites. This process, called leukosis, usually affects other visceral structures also. Leukosis, however, does not occur in leukocytosis, even when that is extreme as in the leukemoid reaction.

Dr. Piemme*: Was there any finding at the autopsy examination to corroborate the clinical diagnosis of the intravascular coagulation syndrome?

---

* Dr. Thomas E. Piemme, Professor of Medicine, The George Washington University School of Medicine.

Dr. Smith: Fibrin thrombi were identified in the small vessels of the kidney but were not seen elsewhere.

### Anatomic Diagnoses

Absence of right breast

Metastatic carcinoma of heart, lungs, liver, gallbladder, ileum, colon, peritoneum, right and left ovaries, lymph nodes, spleen, bone marrow, left breast, thyroid, right and left adrenals, choroid plexus, and skin.

Leukemoid reaction (clinical)

### Reference

1. KAPLOW, L. S.: Cytochemistry of leukocyte alkaline phosphatase. Am. J. Clin. Path., 1963, 39, 439.

# Pulmonary Alveolar Proteinosis:

## Report of a Case

RICHARD A. NICKLAS, M.D.*

BECAUSE PULMONARY ALVEOLAR PROTEINOSIS is usually considered a chronic insidious disease, it is included in the differential diagnosis of any patient whose chest X-ray films show an acinar-filling pattern, whether he is asymptomatic or has mild to moderate pulmonary symptoms. It is indeed considered little, if at all, in the patient with severe pulmonary symptoms of recent onset accompanied by prominent roentgenologic changes in the lungs. Infection, embolism, or neoplasm should and do share the spotlight in the discussion of any such patient. However, the abruptness with which pulmonary alveolar proteinosis can appear, especially when associated, as it frequently is, with superimposed infections, is dramatic. This is well illustrated by the following case report of a 28-year-old Negro woman who, 1 month before she was admitted to the hospital, had normal chest X-ray findings and yet died 14 days after admission. To the best of my knowledge this is the shortest period from known onset of illness to death reported in the literature.

### Report of Case

The patient, a 28-year-old Negro woman, was admitted to the hospital because of shortness of breath, pain in the right side of the chest, and hemoptysis. She had been well until 2 weeks prior to admission when she developed swelling in the anterior midline of the neck associated with pain and tenderness. At that time an adrenal cortical steroid was prescribed, and these complaints subsided over the ensuing 4 days. She continued to take the steroid medication, however, until coming to the hospital. One week before admission her usual morning cough, which was attributed to smoking, became worse and was productive of a small amount of yellowish sputum. This was associated with malaise and an oral temperature of 99.6° F. Two days before admission vague discomfort was experienced in the lower posterior chest. One the morning of the day of admission the patient arose with severe pain over the right anterior lateral portion of the chest. It was sharp and accentuated by deep breathing. Cough was also markedly increased on this morning and was productive of a large amount of purulent sputum, streaked with blood. The patient also noted fever, profuse perspiration, and pronounced shortness of breath.

She had had an illness described as pneumonia 10 years prior to admission but not requiring hospitalization. She had smoked 2 packs of cigarettes per day for 8 years. She had a morning cough for the past 5 years and had been on oral contraceptives for 4 years.

On admission the patient appeared to be an alert, moderately obese, well-developed, Negro female in respiratory distress. Her breathing was shallow and rapid, accompanied by pain over the right side of the chest. The temperature was 102°F., the pulse rate 120, the respiratory rate 32, and the blood pressure 120/70. The skin was warm and moist without cyanosis, the neck supple, and the thyroid not enlarged. There was dullness over the base of the right lung, and auscultation revealed decreased breath sounds and coarse rales over the same region. Vocal fremitus was present on both sides. The abdomen was rounded and diffusely tender, especially in the right upper quadrant. The bowel sounds were hypoactive. No calf tenderness was detected.

The urine was cloudly, pale yellow, and acid, with a specific gravity of 1.021. Proteinuria was 3+, hemoglobin 15 Gm., hematocrit 47%, and white blood cell count 11,000. There were 66 segmented granulocytes, 18 band cells, and 16 lymphocytes. Serum electrolytes were normal, BUN was 12mg%, SGOT 220, LDH 1350, and bilirubin normal. On the second hospital day the hematocrit was 25%, hemoglobin 7.8 Gm, and white blood cell count 24,000 with a shift to the left. BUN rose to 44mg%, serum bilirubin to 3.9mg% with 2.7 direct and 1.2 indirect, SGOT and LDH to 4,280 and 5,760 units respectively. Serum amylase was 218 mg%.

Chest X-ray films displayed opacities on both sides of the lung fields, but there was a most pronounced density over the right lower hemithorax. A pulmonary arteriogram was interpreted as normal.

The patient was given oxygen and started on penicillin and a sedative. Her blood pressure dropped to 60/0 requiring vasodepressors. Subsequently she became afebrile and remained so until the last 3 days of her 2-week hospital course. The hematocrit, which had dropped on the 2nd hospital day, remained under 30%. Oliguria became pronounced, the BUN rose, and peritoneal dialysis was necessary. Tenderness of the abdomen persisted. The BUN continued to rise, and the serum creatinine was 11.8. Subsequent X-ray films showed more diffuse densities throughout both lung fields. On the 12th hospital day clonic movements were noted, which progressed to grand mal seizures. The culture of the sputum at this time revealed Proteus bacteria. Dyspnea and abdominal pain persisted, and an endotracheal tube was inserted. The temperature rose to 102°F. and the patient became comatose. She died in respiratory distress on the 15th hospital day.

---

*Fellow, Allergy and Immunology, University of Michigan Medical Center, Ann Arbor, Michigan.

*Necropsy findings.* In the right pleural sac there were fibrinous adhesions. The tracheal mucosa was hyperemic. The lumen contained reddish-brown mucoid material. Microscopically there was extensive ulceration of the mucosa and superficial monilial infection. Focal squamous metaplasia was also noted. The weight of the right lung was 950 Gm. and the left 775 Gm. The bronchi were hyperemic and contained brown mucoid material. Both lungs were of an increased consistency and tended to hold their shape when cut. The right upper lobe and superior part of the left lower lobe was especially firm.

The alveolar septa were thickened and congested. The alveolar lining cells were hypertrophied, prominent, and cuboidal in shape, and had a tendency to desquamate into the alveolar space. Many sections showed the alveoli filled with Periodic-Acid-Schiff positive fibrinous material and scattered polymorphonuclear leukocytic cells and nuclear debris. A few sections showed fibrinous hyaline membranes and intra-alveolar hemorrhages.

The rounded masses of acellular proteinosis material was obscured by an active inflammatory process. This was thought to represent an acute pneumonic process, probably due to *Proteus mirabilis*, which was recovered in pure culture from the lungs postmortem. Lung sections stained for acid-fast organisms and for fungi were negative.

## Discussion

In 1953 Linell and co-workers[1] reported the case of a 57-year-old carpenter who, 6 years before his death, complained of easy fatigability and a mild, slightly productive cough. Autopsy revealed unusual microscopic features which were not epithetically described until Rosen[2] in 1958 used the term "pulmonary alveolar proteinosis." Rosen, who was then Chief of the Pulmonary, Mediastinal and Ear, Nose, and Throat Pathology Section of the Armed Forces Institute of Pathology, had received from puzzled pathologists throughout the country 16 different biopsy specimens of lung tissue in which these charateristics were present. Subsequently, Castlemen at Harvard and Liebow at Yale recorded a total of 27 patients in whom the particular pathological features termed pulmonary alveolar proteinosis had been observed.[2] Until 1970, 111 cases of PAP had been reported in patients engaged in a wide variety of occupations without a consistent history of extraordinary exposure to dust and fumes. In about 50% it was insidious.

There have been many theories about the etiology of this disease. It appears that it was not recognized before 1953, and it is probable that it is a new entity. Primary pulmonary hemosiderosis, eosinophilic granuloma, *Pneumocystis carinii* pneumonia, pneumonitis, pulmonary edema, and desquamative interstitial pneumonitis have been compared histologically with PAP because they involve the accumulation of fluid or cellular material in the alveoli.[3-6]

The question has been raised: Does exposure to silica cause PAP or, alternatively, is proteinosis a feature of acute silicosis?[7] PAP has also been associated with hyperglobulinemia, as in 2 cases of monoclonal gammopathy.[8]

Within the alveolus in PAP are lipids which differ from circulating lipids and which, when extensive, impair the exchange of gases. The lipid portion consists of phospholipids, primarily palmitoyl-lecithin,[9] which is the predominant lipid in the normal lung and perhaps is unique to the lung. Debate still continues in the literature as to whether these lipids are synthesized by the lung or represent transudation of plasma lipids.

That there is protein, which is immunologically-competent protein within the alveolus is well known, but what has concerned most investigators is where this protein arises. Does the protein arise from plasma albumin as a passive transudation of serum into the alveoli with or without macrophages, or does it arise by transformation or death, i.e., alteration or degeneration of vacuolated epithelium lining the alveoli, particularly the alveolar pneumonocytes?[10,11]

It has been accepted by Ramirez[12] that the basic defect in PAP is in the decreased pulmonary clearance of these lipo-protein secretions. As Gross[7] has shown, when masses of desquamative alveolar cells are not removed due to the deficiency of, or defect in macrophages, they remain in the air spaces long enough to disintegrate and produce a picture of PAP. Therefore, desquamative interstitial pneumonitis and PAP may very well be the same disease in different stages or associated with different immunologic responses.

In 1 of the first clinical cases reported a patient with extensive PAP was asymptomatic. In fact, the disease is often first suspected from a routine X-ray film of the chest. More commonly, however, the symptoms which cause the patient to seek the aid of the physician are those of pulmonary insufficiency, namely, dyspnea on exertion, cough, fatigue, and, less commonly, cyanosis. Frequently there is a history of recurrent attacks of severe upper respiratory infections or 'pneumonia.' In evaluating any case of PAP from a clinical standpoint, one must be aware that it may manifest itself in 3 basic ways: first, as a primary disease; second, as a primary disease with complications, the symptoms of which overshadow the symptoms of the primary disease; and, third, in association with other disease entities, especially in the lung itself, the symptoms of which may predominate. Occasionally PAP is accidentally found at necropsy in a patient who has died from another disease.

Roentgenographically, the most prominent features are both lower lung fields involved with what has been described as an acinar-filling pattern. On the other hand, the lungs may be severely involved and yet appear to be normal by X-ray. Indeed, significant amounts of lipo-proteinaceous material may remain in the lungs for months or years without detection one X-ray films. This is especially deceiving when on the X-ray films the lesion may appear to have cleared. There may also be wide disparity between X-ray appearance and the symptoms.

As in most diseases of a chronic nature, PAP has its share of complications. In addition, about 50% of the reported cases have been associated with some form of generalized disease. As of 2 years ago, 25% of the reported patients had died from the disease or its complications. Of these, equal numbers had died from the hypoxic effects of PAP alone and from superimposed pulmonary infections, especially fungal infections. These patients show an increased susceptibility to opportunistic infection, with metastatic brain abscesses due to fungi and *Proteus vulgaris* having been reported. Most bacterial infections coincide with chronic bronchoalveolar stasis and can be treated effectively with antimicrobial agents.[13,14]

The exciting new aspect of this disease, over the past 2 years, lies in the area of treatment, where Ramirez and his associates[15,16] have reported excellent results with bronchopulmonary lavage. To date, in no patient so treated has the disease recurred.

## Summary

The case history and course of treatment of a young Negro woman previously asymptomatic who died of pulmonary alveolar proteinosis 14 days after being admitted to the hospital have been described. The difficulty with early recognition of the disease, its symptoms, and probable causes have been discussed.

The etiology of PAP and, its possible relationship to desquamative interstitial pneumonitis will have to await further study. If the physician is aware of the many diverse ways in which PAP may present itself, and with the practical adaptation of bronchopulmonary lavage in the future, lives may be saved.

## References

1. LINELL, F., MAGNUSSON, B.J., AND NORDEN, A.: Acta Dermatovener, 1953, 33, 103.
2. ROSEN, J. H. AND OTHERS: New Eng. J. Med., 1958, 258, 1123.
3. BUECHNER, H. A.: Chest, 1969, 55, 274.
4. MENDENHALL, E., AND OTHERS: Amer. Rev. Resp. Dis., 1963, 84, 876.
5. DICK, H. J., AND OTHERS: Proc. N.Y. State Ass. Pub. Health Labl., 1957, 37, 3.
6. WILLIAMS, G. E. G. AND OTHERS: Lancet, 1960, 1, 1385.
7. GROSS, P.: Arch. Path., 1968, 86, 255.
8. MARK, J. E. AND OTHERS: Arch. Intern. Med., 1968, 121, 278.
9. RAMIREZ, R.: Amer. J. Med., 1968, 45, 502.
10. BYRNES, M. J.: Arch. Path., 1968, 85, 125.
11. HAWKINS AND RAMIREZ, R. J.: Amer. J. Clin. Path., 1967, 48, 14.
12. RAMIREZ, R. J.: Arch. Intern. Med., 1967, 119, 147.
13. STEER, A.: Arch. Path., 1969, 87, 347.
14. RAMIREZ, R. J.: Amer. Rev. Resp. Dis., 1966, 94, 244.
15. RAMIREZ, R. J.: Amer. Rev. Resp. Dis., 1967, 95, 491.
16. RAMIREZ, R. J.: Dis. Chest, 1966, 50, 581.

# Congenital Heart Disease in the First Year of Life*†

SIDNEY BLUMENTHAL, M.D. AND
MARY JANE JESSE, M.D.

SURGICAL ADVANCES IN THE PAST 2 decades in the management of patients with congenital heart defects have been spectacular. These results have been achieved for the most part in older children and adults. It is somewhat sobering to note, however, that 95% of deaths due to these defects occur in the first year of life, most in the first 6 months. Twenty % of patients with congenital cardiac defects develop congestive heart failure and 90% are less than 1 year of age. The present thrust must be directed toward the treatment of the young infant. To ensure success, an aggressive approach is necessary in which the physician supplying "first-line" care (generalist or pediatrician) becomes a participant in the team which includes the pediatric cardiologist and the cardiovascular surgeon. Pediatric cardiologists and cardiovascular surgeons are, for the most part, aware of their role. The "first-line" physician needs to recognize his role as an active participant so that infants in jeopardy will be recognized and treated early, or the total endeavor is doomed to failure.

A small number of anomalies are responsible for congestive heart failure or death in most infants. Palliative or corrective surgery in infancy is available for infants with anomalies listed in table 1, while there is no surgical relief for the hypoplastic left-heart syndrome or endocardial fibroblastosis, as well as in some of the more complicated lesions seen less frequently.

TABLE 1: Anomalies Amenable to Surgery

| Acyanotic | Cyanotic |
|---|---|
| Ventricular septal defect | Tetralogy of Fallot |
| Atrial septal defect | Transposition complex |
| Patent ductus arteriosus | Tricuspid atresia |
| Coarctation of aorta | Pulmonary atresia |
| Pulmonic stenosis | Total Anom. Pulm. Veins |
| Aortic stenosis | |

It is not essential for the generalist to make an exact anatomical diagnosis; this is required of the pediatric cardiologist. Identification of the infant in early heart failure and infants with a predisposition to hypoxic "spells" or sudden death is the generalists chief role. This will enable him to identify the infant requiring emergency or early referral to a center equipped and staffed to perform the necessary diagnostic studies with a minimum of risk to the infant.

All infants known to have a congenital cardiac anomaly should be followed closely during the first 6 months, their period of greatest risk. Most do not require referral to a large center. The thriving asymptomatic infant should have an electrocardiogram and X-ray films of the chest performed at about 1 month of age. If these are normal, subsequent referral may be indicated on an elective basis.

Emergency referral to a center is indicated for infants who show signs of congestive heart failure or in whom the electrocardiogram reveals a "strain" pattern of either left or right ventricle. In the cyanotic infant, emergency referral is indicated in those with a history of hypoxic "spells", respiratory distress, evidence of pulmonary plethora in the chest X-ray film, or right ventricular "strain" in the electrocardiogram. Procrastination results in decreasing myocardial function resulting from hypoxia and acidemia.

Congestive heart failure in the infant is usually insidious in onset. Decreased cardiac output results in fatigue, usually manifested by feeding difficulty. The infant sucks eagerly but tires after taking a few ounces of formula. He soon becomes hungry, takes a few more ounces, and falls off to sleep. A vicious cycle develops, easily confused with intolerance to formula, "colic", and "failure to thrive". Grey, mottled cold extremities indicative of vasoconstriction are a homeostatic response to an inadequate cardiac output.

Tachypnea is usually the earliest manifestation of heart failure in the infant. Pulmonary venous congestion secondary to left-heart failure is manifested by tachypnea. Respiratory rates over 50/minute are abnormal in the quietly resting infant. Those in failure commonly exhibit respiratory rates of 60-100/minute and at times 120-150/minute. In addition to tachypnea, one may note intercostal and sternal retraction and eventually bronchial congestion with cough and bronchospasm. Rales, in the absence of infection, are only seen in late stages of heart failure. Tachypnea is accompanied by tachycardia and often a gallop rhythm heard best about 0.10 second after the second sound, often resembling a third heart sound. Pulmonary venous congestion may be identified on the X-ray film by hilar shadows, at times extending to the periphery of the lung.

---

*Submitted to MEDICAL ANNALS by the Washington Heart Association.

† From the Department of Pediatrics, College of Physicians and Surgeons, Columbia University, New York City.

Systemic venous congestion secondary to right-heart failure is manifested by hepatomegaly, the liver edge extending more than 4 cm below the costal margin. Tenderness is uncommon. Pitting edema and cervical-vein distention are not usually apparent.

Heart failure of sudden onset is uncommon in infants. It may result from an acute myocarditis, dysrhythmias, or myocardial infarction.

"Spells" are seen most often in infants with the tetralogy of Fallot. About 10% end in fatalaties, and an equal number are complicated by cerebrovascular accidents. "Spells" are characterized by the sudden onset of dyspnea, irritability, and a marked increase in degree of cyanosis. The infant becomes limp, may convulse and/or lose consciousness. Spells are associated with temporary disappearance of a pre-existing murmur, decreased arterial oxygen saturation and ST-depression with increased p-wave voltage in the electrocardiogram. Spells may be seen in very early infancy, becoming most common around 9 months of age, and decreasing in frequency after 18 months. They often occur without warning but may be precipitated by crying, fever, or hot weather. "Spells" should be treated by placing the infant in the knee-chest position and administering oxygen and morphine (0.2mg/Kg). Urgent referral for diagnosis and surgical relief is indicated.

The possibility of sudden death due to critical aortic or pulmonic stenosis should be considered in any infant with electrocardiographic evidence of left-or right-heart "strain" patterns. It behooves the generalist to recognize these patterns as his minimum requirement in pediatric electrocardiography.

Several types of cyanosis may be seen in infants. Peripheral cyanosis due to vasoconstriction is associated with cold, mottled extremities. Harlequin cyanosis has no clinical significance because it is common in normal infants during the first week of life and may be seen as late as 28 days. It is confined to one-half of the body with strict mid-line demarcation. More commonly, it is manifested by pallor or redness, but semicyanosis may be the presenting feature. Cyanosis due to pulmonary disturbances or right to left intracardiac shunting may be difficult to differentiate on clinical grounds if accompanied by respiratory distress. In the absence of respiratory distress the cause is most apt to be a right-to-left shunt. We believe that an anatomical diagnosis should be made in all cyanotic infants but not necessarily on an emergency basis.

**CALORIES** / 7 oz. Serving*

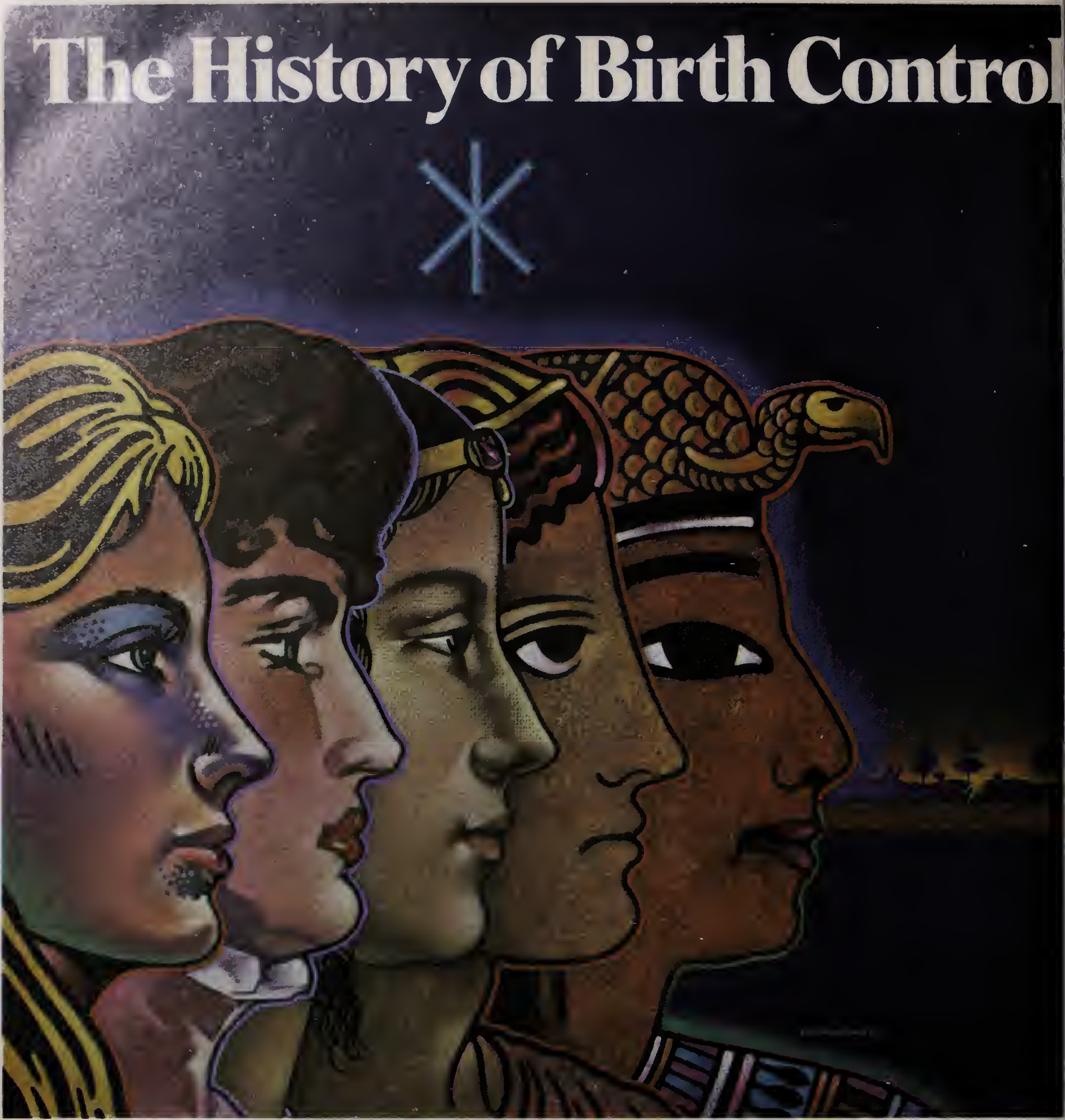
| | | | |
|---|---|---|---|
| Beef Broth | 22 | Vegetable | 68 |
| Consommé | 29 | Tomato | 69 |
| Chicken with Rice | 43 | Cream of Asparagus | 70 |
| Chicken Gumbo | 48 | Cream of Chicken | 76 |
| Chicken Noodle | 54 | Cream of Mushroom | 115 |
| Cream of Potato | 58 | Green Pea | 116 |
| Chicken Vegetable | 60 | Cream of Shrimp (Frozen) | 132 |
| Vegetable Beef | 66 | Bean with Bacon | 133 |

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

There's a soup
for almost every patient and diet
...for every meal
and, it's made by Campbell

# The History of Birth Control



### After a 4,000-year search, have women finally found freedom?

Abortion and infanticide have, throughout history, been the final and desperate resort of women who were unable to control their fertility, but for almost 4,000 years they have sought ways to prevent conception.

In ancient Egypt they used pessaries of crocodile dung or tried to clog the motile sperm with honey and a gumlike substance. The women of Islam used tampons of pomegranate pulp and rock salt. In Japan they burned little balls of "burning grass" on the *mons veneris* or, more practically, tried to cover the mouth of the uterus with disks of oiled bamboo tissue paper. In the 18th Century in France upper-class women rediscovered the vaginal sponge, a device mentioned in sources as old as the Talmud.

It may seem now that such advances as oral contraception and the IUD have freed women from this often fruitless search and consequent suffering, but there are millions of women in the United States and elsewhere who have less knowledge of, and less recourse to, contracepti than Egyptian women of the Twelfth Dynasty. Nothing is more urgent to all of us than to bring them help. We cannot long support the ecologic pressures of an additional 70 million Earth inhabitants each year.

# Searle contributions to the science of contraception

## BOTH AVAILABLE IN 21- AND 28-PILL SCHEDULES

# Ovulen® · Demulen®

Each white tablet contains: ethynodiol diacetate 1 mg./mestranol 0.1 mg

Each white tablet contains: ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Demulen (for its low estrogen and Searle's progestin) and Ovulen (with its wide physician and patient acceptance) offer almost complete contraceptive effectiveness and a low incidence of side effects—both with a choice of pill-taking schedules...simple "Sunday-starting" and patient-proof Compack® tablet dispensers.

**Actions**—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

**Special note**—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

**Indication**—Ovulen and Demulen are indicated for oral contraception.

**Contraindications**—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings**—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain$^{1-3}$ leading to this conclusion, and one$^{4}$ in this country. The estimate of the relative risk of thromboembolism in the study of Vessey and Doll$^{3}$ was about sevenfold, while Sartwell and associates$^{4}$ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

**Precautions**—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives**—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T$^{3}$ uptake values; metyrapone test and pregnanediol determination.

**References:** **1.** Royal College of General Practioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. **4.** Sartwell, P. E., Masi, A. T., Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. 90:365-380 (Nov.) 1969. 1A7

SEARLE

OVULEN • DEMULEN
Manufactured by SEARLE & CO.
San Juan, Puerto Rico 00936
*For more detailed medical information write:*
G. D. Searle & Co., Medical Department
P.O. Box 5110, Chicago, Illinois 60680
Where "The Pill" Began

**Mylanta®**
**24 million hours**
**a day.**

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

**Mylanta®**
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart
PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

# President's Page

## Medical Records Act

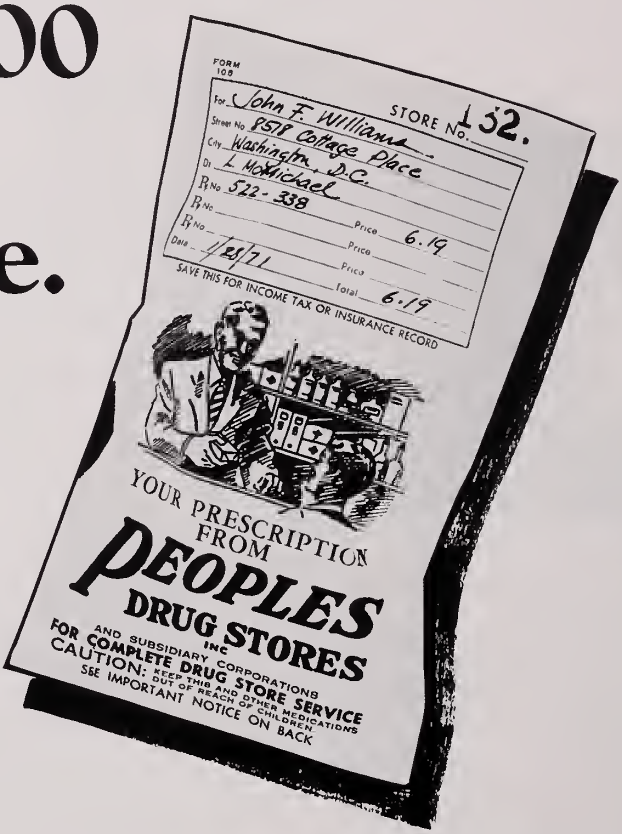
One of the special pieces of legislation your Society has been very interested in has been the Medical Records Act. This bill was introduced into Congress earlier this year and hearings were recently held before Congressman Hagen's Education Subcommittee of the House District Committee. This is very important legislation and has been enacted into law at the present time in some twenty-five states. Its purpose is to protect the physician from liability for any participation he has in the process of peer review. It further protects physicians in the free discussion of teaching conferences without fear of legal reprisal. Currently, the law does not protect us from liability in the event material is taken from hospital conference reports, morbidity and mortality studies, utilization review, or any of the other special committees and research projects which are part and parcel of virtually every hospital teaching program. Records of these conferences may be obtained by subpoena and used in legal action against a physician. In an attempt to promote free and open discussion and to provide an atmosphere of learning for students, staff and practitioners alike, and in order to continue with the review activities required by the Congress, such protection is mandatory if we are to continue these efforts unhindered. This proposed legislation is not just desirable, it is vital if we are to provide physicians with some type of protection from legal harrassment in the course of the performance of their responsibilities in education and review.

It was therefore with a great deal of dismay that we found the Mayor, Deputy Mayor and Corporation Counsel in opposite corners, categorically opposing this legislation. As a matter of fact, they have opposed us in each and every piece of legislation we have proposed, including the right to incorporate, and the revision of the licensing commission.

We believe our stand is proper and the positions we have taken are correct. We are cautiously hopeful that the Congress will agree with us.

Marvin C. Korengold

# The bag that has earned more than 125,000,000 votes of confidence.


FORM 108
For John F. Williams
STORE No. 152.
Street No 8518 Cottage Place
City Washington, D.C.
Dr L. McMichael
℞ No 522-338
℞ No
℞ No
Price 6.19
Price
Price
Date 1/28/71
Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD
YOUR PRESCRIPTION FROM
PEOPLES DRUG STORES INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®

PRESCRIPTION DRUG STORES

**WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.**

# Editorials

## Demonstrations in the District of Columbia

### A Message from the Emergency Medical Committee

The Presidential Commission on Violence distinguished four levels of dissent: peaceful assembly, non-violent civil disobedience, violent demonstration and terrorism. Clearly, participants in peaceful demonstrations have a right to provide themselves with medical presence. Government frequently assists in this function. The extreme case of terrorism is likewise clear cut; one cannot grant special privileges to medical auxiliaries of the Klu Klux Klan intent on dynamiting a black Sunday School. In the middle two cases, non-violent disobedience and violent protests, medical presence is a source of confusion to the police charged with controlling the demonstration, to the physician pledged to aid the demonstrators, and to other physicians on the sidelines attempting to judge rightness and wrongness in the action of both groups.

As a conceptual scheme all such demonstrations can be seen as contests between the "ins" who are defacto directing police activities and the "outs" whose wish is not only to call attention to grievance but who also may wish to show the "heartless and repressive" tacts of the "ins".

Establishment physicians, presumably allied with the "ins" are looked upon as not trustworthy by the "outs". They prefer to put their faith in a "neutral" medical presence. The "neutral" medical presence may seem neutral to the "outs" but to the police they are parcel of the enemy.

Once the battle is joined, both sides quickly fill the air with cries of "foul." The truth is never known to anyone's satisfaction. The "ins" charge the "outs" with using their medical presence,–Red Crosses and all–as a screen for hostile activity. The "outs" charge harassment and sabotage of their merciful mission by ignorant goons. The police drop all pretense of cooperating with the "out" physician. The "outs" in turn retaliate with charges of brutality and gross malfeasance; both sides plead for public sympathy and aid.

Is this scenario inevitable? It certainly is historically accurate. Are there any rules of behavior? Is it possible for physicians to be truly neutral? Can they command the respect of *both* police and demonstrators? If such a laudable goal is to be reached, certain preliminary suggestions may be useful: (1) Police should recognize that medical presence at a scene of potential trouble does not of itself constitute political support for the action. By the same token, physicians present should attempt to set themselves a little apart from the demonstrators by abjuring buttons, placards and even costume and grooming styles that seem to support political goals of the demonstrators. (2) Both sides should meet and be on friendly terms beforehand. Police should agree to recognize specific pre-negotiated identification for physicians. Physicians should accept this identification only if they truly intend to abide by the rigid standards of neutrality. (3) Physicians should confine themselves to purely medical activity, if they sincerely want to have medical help at trouble points. If they become involved in legalistic arguments or use their presence to witness and protest "police brutality", they will be barred from the areas of greatest need and will no longer be able to be of medical help. In other words, they have the choice between administering to the ill and injured or being part of the political process. Logic would suggest that he can do both, practical experience shows he cannot.

HARRY ZEHNER, M.D.  
*Chairman, Emergency Medical Committee*

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036

CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

# ►D.C. HEALTH NOTES

## Pediatric Nurse Associate (Practitioner)

The Office of Nursing of the Community Health Services Administration of the Department of Human Resources inaugurated a new training program for pediatric nurses this past spring which is expected to extend quality health care to more children in the District of Columbia.

Initiated in the CHSA's Community Health Centers under Dr. John Algee, the program was started following a demonstrated need for additional pediatric care.

The major objectives of the program are to more effectively utilize the skills of the nurse and physician in providing health services for infants and children and to better prepare the professional nurse through specialized training to share in the management of the total patient care.

The course is divided into three phases of training: 10 weeks of didactic lectures and study with at least eight to 12 hours of clinical experience per week; six weeks of concentrated clinical experience in the Neighborhood Health Centers with at least four hours per week being spent in lectures at the training center; and six months of internship during which time each trainee will gradually assume a more independent role in the provision of well-child care and the management of minor illness. The nurse will be working in a collaborative effort with the pediatrician and be required to spend at least eight hours per month in continuing her education.

Graduates will receive certificates as Pediatric Nurse Associates (Practitioners) and will be prepared to give well-baby physical examinations and initial histories and screening examinations for ill children under medical supervision. Also, the Pediatric Nurse Associate will provide medical advice, consultation, and follow-up.

The training program will be ongoing. Nurses in the Department of Human Resources, who meet the entrance criteria and who work within the administrative constraints of the Department's programs, will have an opportunity to participate.

This important program is expected to enhance comprehensive medical care for the children of the District. The physician reviews all patients' records and assigns only those cases for follow-up to the Pediatric Nurse Associate that he believes can be handled effectively. If the Associate discovers an unusual situation, or if the child needs a prescription, a consultation with the pediatrician is requested.

It is important to emphasize that the Pediatric Nurse Associate is and will remain a nurse. She has, however, obtained greater expertise in health appraisal and is now able to add depth to the pediatric care she provides as a result of the Pediatric Nurse Associate Training Program.

The Pediatric Nurse Associate will be on regular assignment at the Clinic or Health Center and, therefore, will be able to maintain a continuing relationship with the patients and parents.

A large part of the nurse's time will be utilized in counseling not only parents, but adolescents and teenagers as well. Also she will utilize other referral agencies, which might be involved in the child's or family's health care programs.

The Pediatric Nurse Practitioner Program will train nurses to serve all facilities of the Department of Human Resources where there is a need for additional comprehensive pediatric care.

Eight nurses are already in the third phase of the program and they are now working in Neighborhood Health Centers, where they will eventually be Pediatric Nurse Practitioners. The second class is expected to start early next year.

RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*Associate Director, Department of Human Resources*

**THE BALANCED RETIREMENT PLAN**

**A KEOGH ACT PROGRAM with a wide range of both guaranteed and equity investments. Pension and profit-sharing plans for professional corporations also available on a group basis.**

**Co-sponsored by the Medical Society of the District of Columbia**

**For information call or write--**

**Suter Associates Retirement Planning Company**

**2545 Wilson Blvd. Arlington, Virginia 22201**

***Telephone:* 525–6700**

# ►D.C. MENTAL HEALTH ADMINISTRATION

## The Rehabilitation Center for Alcoholics

Over 14,000 admissions have been recorded at the District of Columbia's Rehabilitation Center for Alcoholics (RCA) since it opened its doors in November, 1966. 14,000 men and women whose lives have been destroyed by the bottle. Homes, families, friends, jobs, possessions: all are gone, and they arrive at RCA with nausea, tremors, insomnia, sweating, and a strong feeling of irritability. They are withdrawing from alcohol. This is the end of their road, and they ask the District Government to help them solve a problem whose solution has eluded them for months or even years.

RCA is for District residents, but many patients are homeless and are in RCA because the District was the latest place they were homeless. A large body of men, especially white men, hitchhike around the Nation living in first one large city and then another. Cities where they can find anonymity, free handouts and booze. Thus, only half of RCA's patients are Negro, with homeless Whites making up the majority of the other half.

There are other differences. Negro patients, having families and friends in the District, tend not to be heavy repeaters at RCA, while the White patient tends to come back time and time again. The overall figures for repeaters runs around 62%, with the number of returns averaging approximately 3 per man repeating. After that they are presumably remaining sober.

Each man arriving at RCA is given a medical examination, a bed on the Convalescent Detoxification Unit, medication as needed and later, an introduction to the programs available at the Center. He is not drunk when he arrives, having been detoxified at the Detoxification Center downtown at least through the acute stages. He is not completely withdrawn from the effects of his last drinking spree, however, so is kept in RCA's Convalescent Detox unit up to 72 hours. Before the end of that time he is encouraged to sign a voluntary admission form for entrance into the treatment program. All patients seeking admission into treatment programs at RCA are admitted. The only exceptions are those that must be admitted to other facilities, such as tuberculosis hospitals, for other more immediate problems.

Once a patient has volunteered for the program he undergoes psychological testing and an interview with a social worker then receives several days of orientation lectures. These teach him what is available to him in the various departments and service sections at RCA and how to take maximum advantage of them. His legal rights are also outlined. This is especially important since from 6 to 8 % of the patients are legally committed to RCA by the courts under special laws governing alcoholics in the District. Based on the results of his diagnostic evaluations an intake staff determines which of the various treatment programs he is most suited for. Once admitted to the unit to whose program he is assigned, a Unit Treatment Team meets with the patient and formulates with him the details of his treatment program. The Team is composed of members of all the disciplines available at RCA, which has the largest and most diversified staff in terms of the disciplines represented, of any such alcoholic treatment center in the Nation.

After a patient has been on the program for 30 of the 90 days recommended for such programs he is called back in for a review staffing at which time his progress and difficulties are assessed. Any changes necessary are made and he continues in the program until he is called back in for terminal assessment and counseling. Numerous options are made available to him.

Vocational Rehabilitation may be warranted in which case these staff members may have special diagnostic testing done prior to sending him out on a job or retraining him for a new job. Training takes all forms from adjustment counseling on a new job to sending the patients to college for certificate or degree programs. A patient who gets a job may leave RCA immediately, may enter the Work Release program in which he lives at RCA while working on an outside job until he can get back on his feet, or he may live in one of several halfway houses in the Metropolitan Area until he can get settled back into the community.

During his stay at RCA he has participated in the Incentive Therapy program which allows him to work part time in the installation and make some spending money or money to start his new life while maintaining job skills or learning new skills.

Are alcoholics cured at RCA? That depends on the theory of alcoholism held by the person asking the question. If alcoholism is nothing more than a bad habit as the Behaviorist maintains, then RCA does cure many by altering their drinking behavior and even eliminating the habit altogether in some patients. If one is among the many who feel that alcoholism is a chronic illness, then it can never be cured but only arrested by maintained abstinence. Rather like an arrested case of tuberculosis with the organisms always present and potentially dangerous. Some cases are arrested at RCA.

If one feels that addictions are caused by emotional or personality problems, then he must feel that RCA is making great strides in curing him by the intensive psychotherapy that most patients receive. If one feels, on the other hand, that addictions represent physiological changes in the brain and/or other tissues, then he will take heart from current findings in RCA's research laboratories in which catabolic hormones are preventing addiction in an animal population, as well as preventing lethal effects of overdoses.

Some of the medical complications can be cured but others can not. The polyneuritis, oculomotor difficulties, seizures and mental abberation associated with Wernicke's alcoholic psychosis can be halted and in many cases reversed by prompt medical attention. The memory and learning deficits of Korsakoff's psychosis, and the long term effects of untreated Wernicke's disease have no known treatment or cure. Almost 80 percent of the patients admitted to RCA have measurable loss of the Korsakoff type (measured with the Benton Visual Retention Test), and this loss does not recover during the 90 days the patient remains here.

Patients who take longer to withdraw from an average drinking spree tend to have the most brain damage, the correlation being direct and linear. Among patients of a given age, those who began drinking at an earlier age tend to have less brain damage than those who begain heavy drinking later in life, and while the death rate is higher among alcoholics up through age 55, those surviving beyond age 55 have an increasingly greater chance of surviving longer than the nonalcoholic with each additional year of age, as measured by the ages of patients admitted to RCA. Patients who die are more likely to die from alcohol-associated accidents than from the physiologically deteriorating effects of alcohol per se, automobile accidents and drowning being cases in point.

While there is no alcoholic personality as such emerging from the research literature, the McAndrews Scale from the Minnesota Multiphasic Personality Inventory does screen out alcoholics with 80 percent or better accuracy, even from among a psychiatric population. Conceptually, the same scale should be of value in predicting future alcoholism among students in Junior and Senior High Schools, but no research has been done in this area to date and such preventive use is not being made of this instrument. The District of Columbia Mental Health Administration would like to pursue this.

The private practitioner may refer patients directly to the District of Columbia Mental Health Administration alcoholic treatment facilities for diagnosis and classification. He may want to screen his patient along the following lines in the interim:

a. Drug abuse. The patient uses alcohol more often, or in greater amounts than do his relevant peers. In effect, he sometimes allows his use of alcohol to stand between him and the attainment of goals such as adequate performance on the job, maintenance of a family and/or friendships, etc.

b. Drug habituation. The patient uses alcohol as a routine way of gaining satisfaction or pleasure. He may or may not routinely drink until he is drunk the way an addict usually does. Such habitual use is often deleterious to his health, and often interferes with adequate interpersonal functioning.

c. Drug addiction. The patient goes through the withdrawal syndrome when use of alcohol is terminated. He will experience craving cycles in the absence of the drug and will experience repeated minor withdrawal symptoms every few months for over a year after the last ingestion of alcohol. He predictably drinks again during these periods of "dry withdrawal." His drinking usually has a strong element of compulsivity in which he must drink until he is drunk, and often will drink to stay drunk until he is too sick to drink or has run out of money or has "drunk himself sober", that is, until he can no longer experience the feeling of drunkeness no matter how much more he drinks, or until he is forceably prevented from further drinking by outside forces.

Old tennets in the field of alcoholism that are currently being challenged are the notions that alcoholics drink because they have problems, be they internal or external. Emerging thought suggests that they drink for the same reasons most nonalcoholics drink; because drinking is pleasurable. "Once an alcoholic, always an alcoholic" is being challenged by research appearing in the literature in which more and more alcoholic patients are supposedly taught to drink socially again, i.e., without the compulsivity. The notion that alcohol in any amount "destroys hundreds or thousands of brain cells" is being challenged by the findings that alcohol may not cause neurological damage in the presence of an adequate diet, especially one rich in thiamin, and may redound to the enhanced health of the individual if taken in moderate amounts.

RCA, then, is a pioneer facility in the field of alcoholism treatment and rehabilitation, following upon pioneering laws passed in the District that declared alcoholism a disease and public intoxication no longer a crime. As a pioneer, it has attracted numerous state and local officials from across the Nation who are searching for ways of handling their own alcohol related problems. It has also attracted persons with drinking problems from across the Nation who have no other place to go for such enlightened treatment modalities. Thus, the presence of RCA coincides with an increasing number of homeless alcoholics in and around the District the way that New York State's abortion laws coincided with a marked inflow of abortion cases.

The patient population at RCA has grown from 225 in December, 1967 to 765 in October, 1971. That does not mean that RCA is not doing its job. It indicates that other State administrations are not doing their jobs and the already overburdened District of Columbia Mental Health Administration is inheriting their problems. This will continue until the medical profession gets to work on the problem of the disease, alcoholism, and insists that state legislatures pass enlightened laws requring proper care and treatment of the diseased.

ESSEX C. NOEL III, M.D.
*Director, Mental Health Administration*

MAXWELL
AND
TENNYSON
INC.
*Pharmacists*
916 Nineteenth Street, N.W.

SERVICE TO
PHYSICIAN & PATIENT
SINCE 1926

PHONES
223-4711
223-9797
223-9798

**We located our offices just off Farragut Square to better serve the professional* and personal insurance needs of doctors.**

Employees Workmen's Compensation • Bonds on Employees • Equipment Floater • Fire Insurance Contents • Business Expense Disability • Non-Cancellable Disability Income • Auto and Home Insurance

**As endorsed by the Medical Society of the District of Columbia.*

Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*

**On formulary and in the pharmacy...**

NDC 15-3503-20
KANTREX®
KANAMYCIN SULFATE
INJECTION
EQUIVALENT TO
1.0 Gm.
KANAMYCIN/3 ml.
Federal law prohibits
without prescription.
BRISTOL

take
advantage
of the
**Kantrex®**
**KANAMYCIN SULFATE**
experience

A dozen years of Kantrex usage have established its efficacy, its versatility, its simplicity.

**And its economy.**

Faced with a life-threatening infection, the physician cannot conscionably consider economy a primary factor in selection of an appropriate antibiotic. However, when susceptibility reports are in, the infecting pathogens are often found to be susceptible to several antibiotics. The physician may then consider dose requirements and cost in his prescribing decision.

Kantrex requires one simple standardized dose for almost any patient with any susceptible mixed Gram-negative/staph infection (Pseudomonas are resistant). The usual adult daily dose of Kantrex is only 1.0 Gm.... and the usual total course of therapy, 7-10 Gm. Translated to dollars and cents, the daily cost of Kantrex therapy may be only 1/2 to 1/8 that of therapy with other parenteral antibiotics used for serious hospital infections.

Doesn't it make good sense to use Kantrex?

**Experience proves it does.**

BRIEF SUMMARY OF PRESCRIBING INFORMATION
(9) 7/27/71
For complete information, consult Official Package Circular

**Warning:** The major toxic effect of parenterally administered kanamycin sulfate is its action on the auditory portion of the eighth nerve. High frequency deafness usually occurs first and can be detected by audiometric testing. Tinnitus or vertigo may occur and are evidence of vestibular injury and impending bilateral, irreversible deafness. In such cases, decrease size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. Watch carefully for ototoxicity in older patients and patients receiving more than 15 Gm. of kanamycin. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in postoperative patients until recovery from anesthesia and muscle relaxants is complete. Avoid concurrent use of other ototoxic drugs including ethacrynic acid and furosemide. Safety in pregnancy is not established

**Indications:** Serious infections due to susceptible strains of *E. coli*, Proteus sp., *Enterobacter aerogenes*, *K. pneumoniae*, *Serratia marcescens* and *Mima-Herellea*. Culture and sensitivity studies should be performed.
**Contraindications:** A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective, alternative therapy is available.

**Precautions:** Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary. In azotemic patients, the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.
**Adverse Reactions:** Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.
**Dosage and Administration:** The usual dose is 7.5 mg./Kg./12 hours I.M. The average dose is 1 Gm. daily for adults and children. The maximum total daily adult dose should not exceed 1.5 Gm. by all routes of administration. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.
**Supplied:** Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations; 0.5 Gm. in 2 ml. 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml. **A.H.F.S. Category 8:12.28**

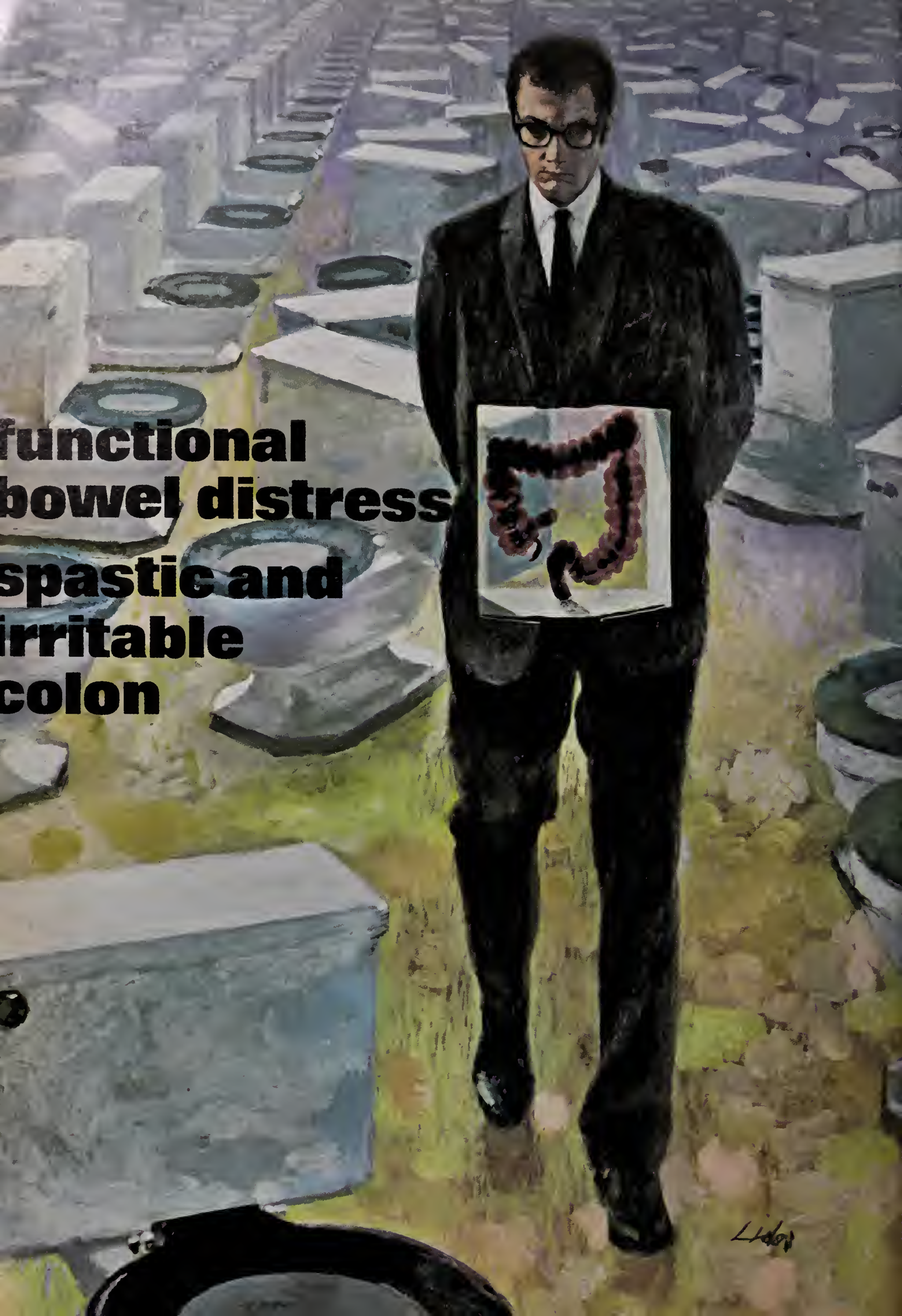
**BRISTOL** BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

DARVON®
COMPOUND-65
65 mg. propoxyphene hydrochloride, 227 mg.
aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine
Lilly
H06

Additional information available to the profession on request.
**Eli Lilly and Company • Indianapolis, Indiana 46206**

Lilly

101488


functional
bowel distress
spastic and
irritable
colon
Lidov

# move up to "the Robinul response"

# when lower G-I symptoms demand a potent synthetic antispasmodic

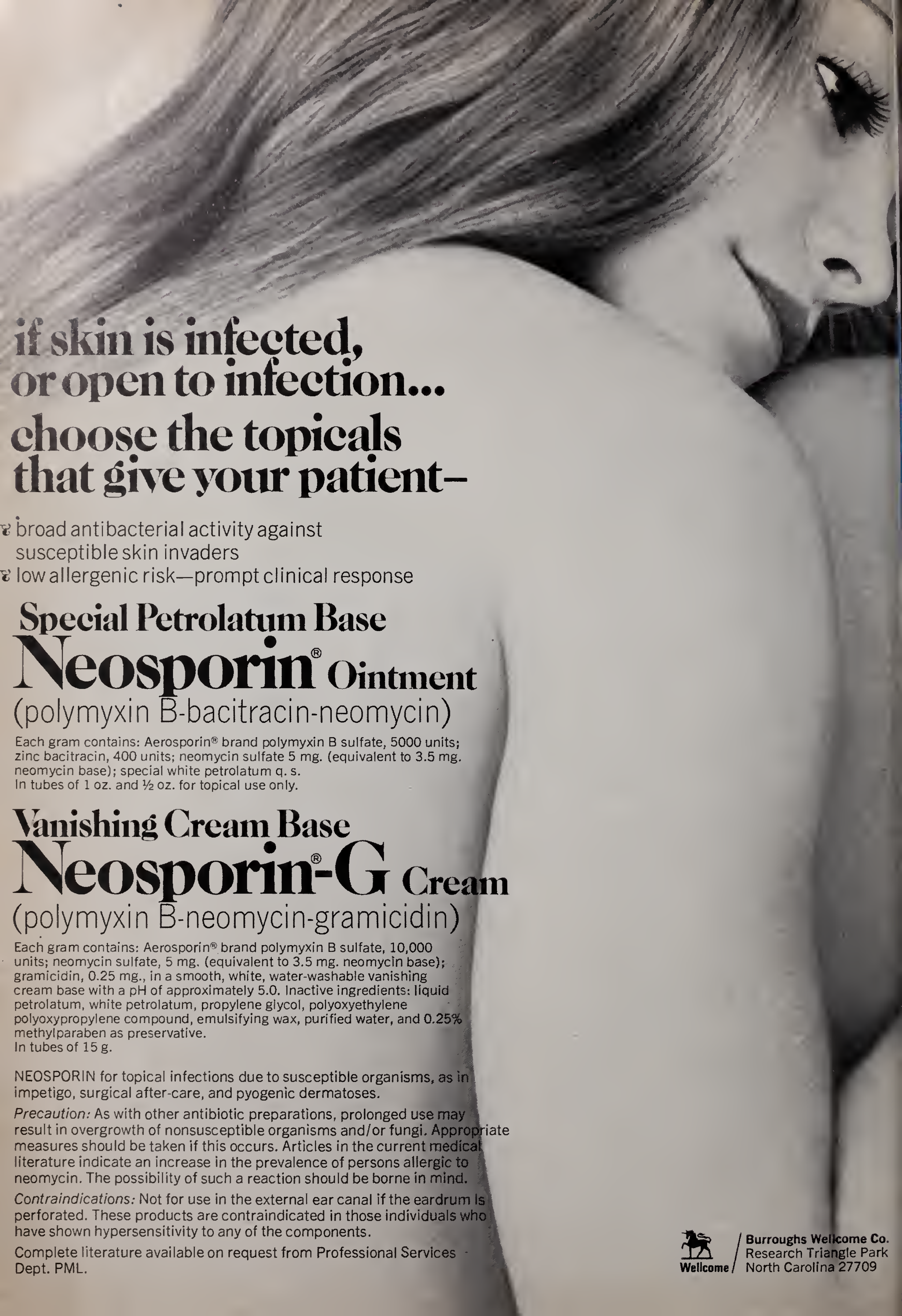
**In treating hypermotility associated with functional lower G-I disorders are you disappointed in the results you've been getting with some of the synthetics? Then *move up* to a potent antispasmodic—Robinul® Forte (2 mg. glycopyrrolate). It provides prompt, pronounced, prolonged suppression of hypermotility, making it a highly effective agent in functional bowel distress, as well as in spastic and irritable colon. Robinul Forte also exerts a more selective action on the gastrointestinal tract. If the patient has a "one tract mind" concerning his lower G-I symptoms, you can help control the anxiety and tenseness by prescribing Robinul®-PH Forte (2 mg. glycopyrrolate with 16.2 mg. phenobarbital —warning: may be habit forming).**

# Robinul® 2mg. Forte (glycopyrrolate)

■ **INDICATIONS** Robinul Forte (glycopyrrolate, 2 mg.) and Robinul-PH Forte are double-strength dosage forms of glycopyrrolate. They are primarily indicated for patients who are less responsive to anticholinergic therapy and for control of the more prominent symptomatology associated with acute episodes of gastrointestinal disorders. Emphasis should be on total management, with due consideration of the various therapeutic modalities available, including diet, antacids, anticholinergic agents, sedatives, and attention to emotional problems. Accordingly, glycopyrrolate is recommended in the management of gastrointestinal disorders amenable to anticholinergic therapy, such as: (1) duodenal ulcer, duodenitis, pylorospasm; (2) gastric ulcer, gastritis, esophageal hiatal hernia, hyperchlorhydria, pyrosis, aerophagia, gastroenteritis; (3) esophagitis; (4) cholecystitis, chronic pancreatitis; (5) spastic and irritable colon, ulcerative colitis, functional bowel distress, diverticulitis, acute enteritis, diarrhea; and (6) splenic flexure syndrome, neurogenic gastrointestinal disturbances. When these conditions are associated with psychic overlay, the formulation with phenobarbital may be indicated. ■ **CONTRAINDICATIONS** Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte (glycopyrrolate with phenobarbital), sensitivity to phenobarbital. ■ **PRECAUTIONS** Administer with caution in the presence of incipient glaucoma. ■ **SIDE EFFECTS** The most frequent side effect noted during clinical trials was dry mouth. Thirty-three (3.3%) of 1,009 patients receiving 1 to 32 mg. of glycopyrrolate a day complained of dry mouth of moderate to severe degree, but only 11 discontinued treatment because of this. Blurred vision, constipation, and urinary hesitancy have been reported infrequently. Other side effects associated with the use of anticholinergic drugs include: tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash. ■ **DOSAGE** The average and maximum recommended dose of Robinul Forte (glycopyrrolate, 2 mg.) or Robinul-PH Forte is one tablet three times daily (in the morning, early afternoon, and at bedtime). To obtain optimum results, dosage should be adjusted to the individual patient's response. After the more severe symptoms associated with acute conditions have subsided, the dose may be reduced to the minimum required to maintain symptomatic relief. ■ **SUPPLY** Robinul Forte (glycopyrrolate, 2 mg.) is available as scored, compressed pink tablets engraved AHR/2 in bottles of 100 and 500. ■ Robinul-PH Forte (glycopyrrolate, 2 mg., with phenobarbital, 16.2 mg.) is available as scored, compressed blue tablets engraved AHR/2 in bottles of 100 and 500.

A. H. Robins Company, Richmond, Va.

A-H-ROBINS



# if skin is infected, or open to infection...

# choose the topicals that give your patient–

- broad antibacterial activity against susceptible skin invaders
- low allergenic risk—prompt clinical response

## Special Petrolatum Base

## Neosporin® Ointment

(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 5000 units; zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

## Vanishing Cream Base

## Neosporin®-G Cream

(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

*Precaution:* As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

*Contraindications:* Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.

Wellcome

**Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

# IN ASTHMA
# IN EMPHYSEMA

*optional therapy*

# THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinaations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

**MUDRANE—original formula**

*First choice*

**MUDRANE-2**

*When ephedrine is too exciting
or is contraindicated*

**MUDRANE GG**

*During pregnancy or when K.I. is
contraindicated or not tolerated*

**MUDRANE GG-2**

*A counterpart for Mudrane-2*

**MUDRANE GG ELIXIR**

*For pediatric use
or where liquids are preferred*

*Clinical specimens
available to physicians.*

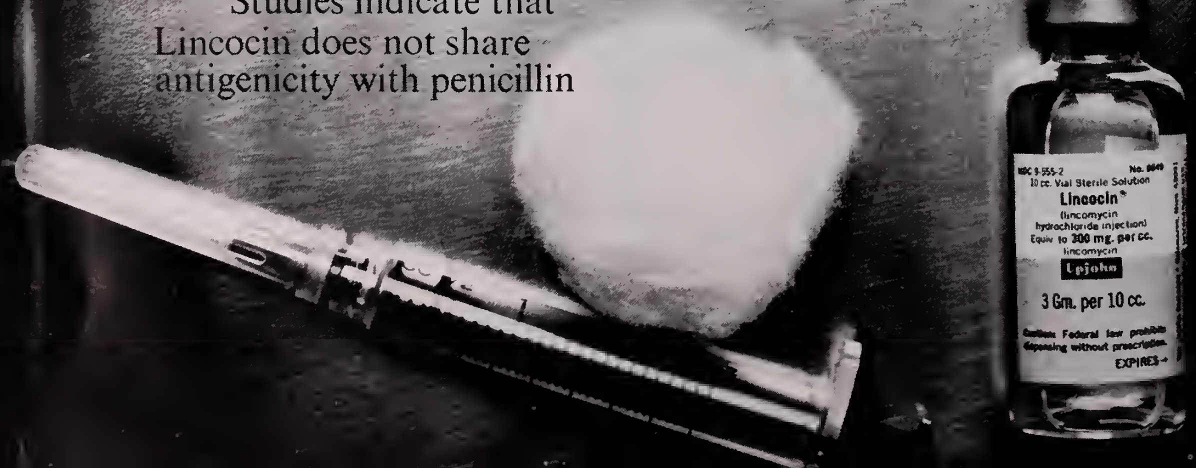
WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217
*Manufacturers of Ethical Pharmaceuticals*

# Hypersensitivity to penicillin is a good reason to consider Lincocin®

## (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With ß-hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.



10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES→

# So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

● Sterile Solution (300 mg. per ml.) ●

**Lincocin®**

**(lincomycin hydrochloride, Upjohn)**

NDC 9-555-2
No. 8049
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES →

© 1971 The Upjohn Company

● Sterile Solution (300 mg. per ml.) ●

# Lincocin®

## (lincomycin hydrochloride, Upjohn) for respiratory tract, skin, soft-tissue, and bone infections due to susceptible streptococci, pneumococci, and staphylococci

| Each preparation contains: | Lincomycin hydrochloride monohydrate equivalent to lincomycin base |
|---|---|
| 250 mg. Pediatric Capsule | 250 mg. |
| 500 mg. Capsule | 500 mg. |
| *Sterile Solution per 1 ml. | 300 mg. |
| Syrup per 5 ml. | 250 mg. |

*Contains also: Benzyl Alcohol 9 mg.; and, Water for Injection—q.s.

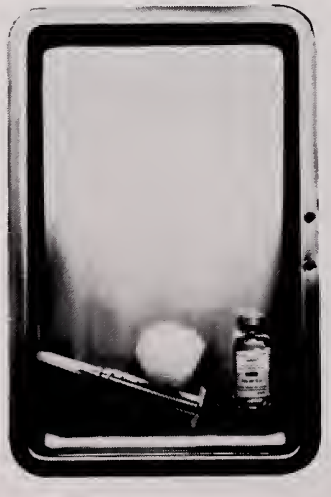
An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances.



*Cardiovascular*—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. *Local reactions*—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: *250 mg. and 500 mg.* Capsules—bottles of 24 and 100.

*Sterile Solution, 300 mg. per ml.*—2 and 10 ml. vials and 2 ml. syringe.

*Syrup, 250 mg. per 5 ml.*—60 ml. and pint bottles.

*For additional product information, consult the package insert or see your Upjohn representative.*

JA71-1203 MED B-5-SR (KZL-6)

The Upjohn Company
Kalamazoo
Michigan 49001

**Upjohn**

# Book Reviews

**Medical Parasitology.** J. WALTER BECK, PH.D. and ELIZABETH BARRETT-CONNER, M.D. Price, $10.75. Pp. 210 with 150 illustrations. St. Louis: C. V. Mosby Company, 1971.

This book is the outgrowth of a manual developed by the senior author for the teaching of medical parasitology, primarily to medical students. The content is divided into three major categories: medical protozoology, medical helminthology, and medical arthropodology. The latter broad subject is so relatively briefly covered that it might have been better had pertinent information on vectors been covered with their related disease entities, rather than a separate category. I would question the necessity for separate chapters (8 and 10) on the Laboratory Diagnosis of Protozoa and Helminths respectively, since much information in these brief chapters is a duplication of that already found under specific disease headings and in the appendices. And organizationally, there is an inconsistency in having the chapter on diagnosis of protozoa following the section on medical protozoology, whereas the chapter on diagnosis of helminths precedes the section on medical helminthology. Included are a series of 140 line drawings by George S. Anderson, Jr. Although many of the drawings of ova and parasites complement and add to the value of photographs of similar subjects, the drawings of the life cycles are quite inferior to the classical life cycles depicted in Mackie's original *Manual of Tropical Medicine* and its successor editions. The substitution of photographs for many of the drawings, which admittedly would have added to the cost, could have made it an even more valuable text.

There are a number of minor errors, including the table on the treatment of malaria (p. 65) in which the oral dose of chloroquine is given as 200 rather than 300 mg of base for the second dose, and the table on the summary of important arthropod-borne human diseases (p. 188) in which flies are said to be the vectors of malaria, filariasis, yellow fever, and dengue. Some statements regarding therapy are questionable. Flagyl (metronidazole) is not by itself an adequate curative treatment for many amebic cyst passers or mildly symptomatic individuals, who make up over 90% of the amebiasis cases seen in this country. If quinacrine (Atabrine) is given in a dosage of 0.3 gram/day for 7 days for giardiasis, relapses should not be common, as stated. Thiabendazole is now recognized as a much more suitable and effective treatment of "creeping eruption" than freezing the skin with ethyl chloride or carbon dioxide snow, and this drug is not mentioned as being at least as effective in the treatment of Guinea worm as Ambilhar or Flagyl. Although tartar emetic is the treatment of choice for *Schistosoma japonicum* it is perhaps erroneously implied that this drug should be used for *S. mansoni* and *S. hematobium* infections, and no mention is made of Astiban (antimony dimercaptosuccinate) or the controversial newer anti-schistosome drug, Hycanthone. However, the authors do state in the Preface that new drugs and regimens may have been released since the manuscript went to press and some of these criticisms of therapy may be unfair.

This book is admirably suited for a study guide for the student, but as stated by the authors, it is not intended to be more than a refresher for practicing physicians. For this latter purpose, except for the advantage of containing some more current information, it is not superior to a number of previously published and similarly titled books on the subject.

MARTIN S. WOLFE, M.D., D.C.M.T.
(London)

**The Human Heart**, 2nd edition. BRENDEN PHIBBS, M.D. Price, $5.75. Pp. 237, with illustrations. St. Louis: C. V. Mosby Company, 1971.

Patient education to improve their understanding of the heart and its failures was the intended purpose of the first edition of this paperback volume. However, the author found it much in demand as a textbook for nurses, technicians, and other paramedical aides working with cardiac patients.

Thus, the second edition has been expanded in detail and scope to assist this group. But it remains a model in clarity of prose and thought. Its simple line illustrations and analogies of complex cardiac events to everyday ideas are delightful and will help every physician in his explanations to patients. The one equating the antigen-antibody reaction in the heart during acute rheumatic fever to Comanches attacking a trapper's fort and in the battle the defenders assisting in destroying their own structure is a little far out.

This book does not attempt to review the literature or to present all aspects of controversial issues, but rather to provide the generally accepted concepts and opinions and yet leave room for those who disagree.

The final brief chapter entitled "Through the looking glass, or whither the cardiovascular system" excitingly anticipates future developments in cardiac disease prevention. It speculates on a "DNA correction factor" to prevent birth defects, a "lipid correction factor" to restore blood fats to normal and dissolve atheroma, a vaccine against streptococcal diseases, and the legislative prohibition of cigarettes.

NORMAN K. BOHRER, M.D.

**Review of Physiological Chemistry**, 13th edition. HAROLD A. HARPER, PH.D. Price, $8.00 (paper). Pp. 529 with illustrations. Los Altos, California: Lange Medical Publications, 1971.

The 13th edition continues to hold its position as the most useful review of chemistry which is fundamental to the study of biology and medicine. It is an excellent ready reference for the physician and is presented in a stepwise manner which allows the reader to obtain as much detail as he desires, or to review only highlights if he prefers.

There are 22 chapters including excellent reviews of lipids and lipid metabolism, enzymology and respiration. The chapter on biological oxidation (written with Peter Mayes) presents a very complex subject in a straightforward and lucid manner which is useful to even the casual reader.

Harper's review is not a textbook containing in-depth presentations of biochemical mechanisms, but that is not what it is intended to be. Many common pathways are given especially those important in understanding basic human biochemistry.

In this reviewer's opinion, the Review of Physiological Chemistry is still the best available reference of its type and serves the physician well in the function for which it was intended.

WILLIAM J. CAMPBELL

**Atlas of Ear Surgery**. WILLIAM H. SAUNDERS, M.D. AND MICHAEL M. PAPERELLA, M.D. Price, $32.00. Pp. 390 with 174 illustrations. St. Louis: C. V. Mosby Company. 1971.

The Second Edition of the Atlas of Ear Surgery by Saunders and Paparella is, as before, a comprehensive atlas of surgical procedures which would be of considerable benefit to those at the resident level. Many points of surgical technique regarding the ear are elaborated, but the experienced otologist, in general, is familiar with most of these. There is an interesting preface that deals with the history of development of otologic surgery after which is a rather lengthy section involving techniques of temporal bone dissection. The section on temporal bone should prove to be of benefit to those again engaged in learing otologic techniques.

The text reviewed here appears to cover in a rather complete fashion the spectrum of otologic surgery performed today. It is of particular value to those receiving their training in otologic surgery.

ROBERT E. PUMPHREY, M.D.

KALORAMA CONVALESCENT HOME, INC.

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE
for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

NURSES REGISTRY
LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

# OBITUARIES

## Weston Bruner, Jr., M.D.
### 1904–1971

Dr. Weston Bruner, Jr., who practiced medicine in Washington for 40 years and was chief of the anesthesia department at the Washington Hospital Center, died September 4, 1971. He lived at 5100 Dorset Avenue, Chevy Chase, Maryland.

A native of Richmond, Virginia, he was a graduate of the University of North Carolina and received his medical degree from the University of Pennsylvania in 1930. He interned at Emergency Hospital in Washington where he also served his residency. He later became chief of the department of anesthesia at Emergency Hospital and continued in that post following the hospital's merger with the Washington Hospital Center in 1958.

Dr. Bruner was a diplomate of the American Board of Anesthesia and a member and former president of both the Osler and the Clinico-Pathological medical societies.

He is survived by his wife, Leah, of the home address and two sons, Weston and Blackwell, both of Washington.

## Henry T. Kulesher, M. D.
### 1911–1971

Dr. Henry T. Kulesher, a founder of the Northern Virginia Doctors Hospital, died October 18, 1971. He lived at 716 E. Broad Street, Falls Church, Virginia.

Born July 14, 1911 in Norwich, Connecticut, he attended the University of Connecticut and received his medical degree from Georgetown University Medical School. He interned at Lawrence and Memorial Hospital in New London, Connecticut and served his residency at the Episcopal Eye Ear and Throat Hospital. He did postgraduate work in otolaryngology at Washington University in St. Louis, Missouri.

During World War II, he served as a major in the Air Force.

Dr. Kulesher was chief of otolaryngology at Northern Virginia Doctors Hospital, Arlington Hospital and Fairfax Hospital. He had served on the executive committee and was a member of the Board of Directors at Northern Virginia Doctors Hospital at the time of his death.

He is survived by his wife, Marian B. and a son Robert R., of the home address; two daughters, Kathryn K. Maher, of Lexington, Kentucky, and Ruth K. Taliaferro, of King George, Virginia; his mother, Adele Kulesher; a sister, Sister M. Henry CSFN, and a brother, Valentine Kulesher, all of Norwich, Connecticut, and six grandchildren.

RMK
*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

***PROFESSIONAL LIABILITY**
**OFFICE PUBLIC LIABILITY**
**LOW COST TERM LIFE INSURANCE**

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

# NEW MEMBERS

## Active

WU SHUNG CHIU, M.D. Office: 901 23rd Street, N.W. Born in Taiwan, China. Medical degree: National Taiwan University, 1959. Specialty: Physical Medicine and Rehabilitation.

JEAN-PIERRE DEMARS, M.D. Office: 2029 Que Street, N.W. Born in Belgium. Medical degree: University of Capetown, 1959. Specialty: Psychiatry.

MARTIN G. DILLARD, M.D. Office: 525 W Street, N.W. Born in Chicago, Illinois. Medical degree: Howard University, 1965. Specialty: Internal Medicine-Nephrology.

LEOVINO D. DURAN, M.D. Office: 110 Irving Street, N.W. Born in the Philippines. Medical degree: University of Santo Tomas, 1964. Specialty: Anesthesiology.

ROBERT FEINSTEIN, M.D. Office: 1712 Eye Street, N.W. Born in New York City, New York. Medical degree: New York University, 1967. Specialty: Dermatology.

MEADE W. FLYNN, M.D. Office: Freedmen's Hospital. Born in Jamaica, West Indies. Medical degree: Howard University, 1966. Specialty: Diagnostic Radiology.

CLARENCE HUBAH, M.D. Office: 1130 Maryland Avenue, N.E. Born in Trinidad and Tobago. Medical degree: Howard University, 1951. Specialty: General Practice.

CHIN-FU FAN, M.D. Office: 110 Irving Street, N.W. Born in Taiwan, China. Medical degree: National Taiwan University, 1966. Specialty: Anesthesiology.

DAVID I. JOSEPH, M.D. Office: St. Elizabeth's Hospital. Born in Cincinnati, Ohio. Medical degree: Western Reserve University, 1967. Specialty: Psychiatry.

HORACE C. LASTER, M.D. Office: Freedmen's Hospital. Born in Chattanooga, Tennessee. Medical degree: Howard University, 1964. Specialty: General Surgery.

CHONG-DOO LEE, M.D. Office: Children's Hospital. Born in Seoul, Korea. Medical degree: Seoul National University, 1963. Specialty: Anesthesiology.

FRANCO M. NELLI, M.D. Office: 5225 Loughboro Road. Born in Italy. Medical degree: University of Bologna, 1958. Specialty: Anesthesiology.

ROBERT J. NEVIASER, M.D. Office: 2150 Pennsylvania Avenue, N.W. Born in Washington, D.C. Medical degree: Jefferson Medical College, 1962. Specialty: Orthopedics-Hand Surgery.

WILLIAM F. PETERSON, M.D. Office: 110 Irving Street, N.W. Born in Newark, New Jersey. Medical degree: New York Medical College, 1946. Specialty: Obstetrics-Gynecology.

MARVIN S. PLATT, M.D. Office: Children's Hospital. Born in Baltimore, Maryland. Medical degree: University of Maryland, 1956. Specialty: Pediatric Pathology.

JOHN RATINO, M.D. Office: 1835 Eye Street, N.W. Born in Washington, D.C. Medical degree: University of Maryland, 1964. Specialty: Plastic Surgery.

SHEN SHO TSENG, M.D. Office: D.C. General Hospital. Born in Taiwan, China. Medical degree: National Taiwan University, 1964. Specialty: Obstetrics-Gynecology.

JAMES REYNOLDS, M.D. Office: 3800 Reservoir Road. Born in Knox City, Texas. Medical degree: Columbia University of Physicians and Surgeons, 1963. Specialty: Orthopedic Surgery.

JAMES V. ROUX, M.D. Office: 930 Kennedy Street. Born in New Orleans, Louisiana. Medical degree: Howard University, 1965. Specialty: General Surgery.

MICHAEL V. VIOLA, M.D. Office: Freedmen's Hospital. Born in Boston, Massachusetts. Medical degree: McGill University, 1964. Specialty: Medical Oncology.

RONALD B. WEBER, M.D. Office: 2150 Pennsylvania Avenue, N.W. Born in Detroit, Michigan. Medical degree: Wayne State, 1963. Specialty: Neurology.

CHAU HSIUNG YANG, M.D. Office: 110 Irving Street. Born in Taipei, Taiwan, China. Medical degree: Kao-Hsiung, 1964. Specialty: Anesthesiology.

## Associate

CECILIN CHISHOLM, M.D. Office: Children's Hospital, Comprehensive Clinic. Born in Kingston, Jamaica, West Indies. Medical degree: Howard University, 1967. Specialty: Pediatrics.

JOHN L. CHRISTENSEN, M.D. Office: 1875 Connecticut Avenue. Born in Columbus, Ohio. Medical degree: Vanderbilt, 1967. Specialty: Public Health.

MARIANO GARCIA, M.D. Office: 10401 Old Georgetown Road, Bethesda, Maryland. Born in Cuba. Medical degree: University of Havana, 1960. Specialty: Endocrinology.

JOHN F. O'BRIEN, M.D. Office: Department of Naval Dispensary. Born in Brooklyn, New York. Medical degree: New York Medical College, 1968. Specialty: General Practice and Dermatology.

## Student

GEORGE WASHINGTON UNIVERSITY. Sophomore: Kathy L. Principi. Junior: George Prioleau.

Wellcome

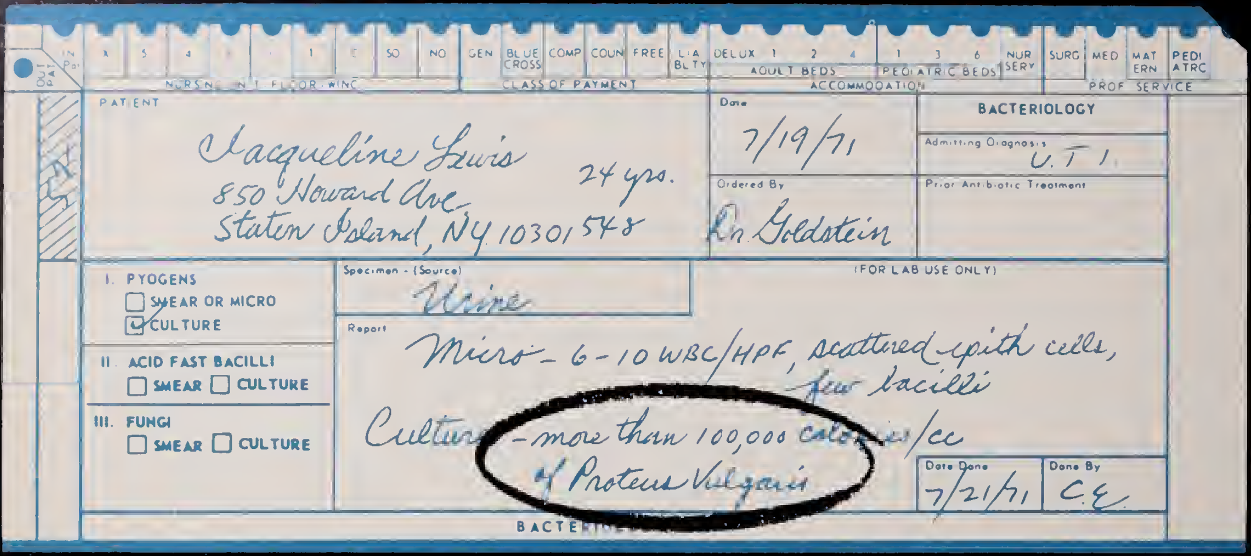
**Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

# A gratifying announcement about Empirin® Compound with Codeine

You may now specify up to five refills within six months when you prescribe Empirin Compound with Codeine (unless restricted by state law).

It is significant in this era of increased regulation, that Empirin Compound with Codeine has been placed in a less restrictive category. You may now wish to consider Empirin with Codeine even more frequently for its predictable analgesia in acute or protracted pain of moderate to severe intensity.

Empirin Compound with Codeine No. 3 contains codeine phosphate* (32.4 mg.) gr. ½. No. 4 contains codeine phosphate* (64.8 mg.) gr. 1. *(Warning—may be habit-forming.) Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.



IN Pat · OUT PAT · 2 · 5 · 4 · 1 · SO · NO

NURSING UNIT · FLOOR · WING

GEN · BLUE CROSS · COMP · COUN · FREE · LIA BLTY

CLASS OF PAYMENT

DELUX · 1 · 2 · 4 · ADULT BEDS · 1 · 3 · 6 · PEDIATRIC BEDS · NUR SERY

ACCOMMODATION

SURG · MED · MATERN · PEDIATRC

PROF SERVICE

PATIENT
Jacqueline Lewis 24 yrs.
850 Howard Ave
Staten Island, NY 10301 548

Date 7/19/71

Ordered By Dr. Goldstein

BACTERIOLOGY

Admitting Diagnosis U.T.I.

Prior Antibiotic Treatment

I. PYOGENS
☐ SMEAR OR MICRO
☑ CULTURE

II. ACID FAST BACILLI
☐ SMEAR ☐ CULTURE

III. FUNGI
☐ SMEAR ☐ CULTURE

Specimen - (Source) Urine

(FOR LAB USE ONLY)

Report
Micro – 6-10 WBC/HPF, scattered epith cells, few bacilli

Culture – more than 100,000 colonies/cc of Proteus Vulgaris

Date Done 7/21/71

Done By C.E.

BACTERI

# the choice is clear:

# Pyopen®

(sterile disodium carbenicillin)

A serious urinary tract infection...
*Proteus vulgaris*, confirmed by pure culture. Fortunately, the strain proves sensitive to carbenicillin and the patient is not allergic to penicillins. The choice is clear: Pyopen.

Unlike other antibiotics currently available for the treatment of Gram-negative sepsis, there are no reports of nephrotoxicity or ototoxicity with Pyopen therapy. Particularly valuable in urinary infections, because of its exceptionally high urine levels, its effectiveness against *Ps. aeruginosa* and *Proteus* species has been amply confirmed by clinical experience and microbiologic studies.

Pyopen is a product of Beecham, the company which pioneered most of today's semi-synthetic penicillins. Your Beecham-Massengill representative would like to give you proof of our dedication to the concept of Total Service.

**THE TOTAL SERVICE CONCEPT:**
**Beecham-Massengill's dedication to the concept of total service is exemplified by the Pyopen Program — offering valuable teaching-learning materials and an added measure of personal attention: *Gram-Negative Sepsis*, a multimedia presentation by leading American medical authorities...*A Profile of Pseudomonas*, a monograph for the clinical microbiologist... *24-hour consultation service* in matters relating to carbenicillin (phone: 201-778-9000)... *emergency supply*, a novel plan for assuring the continual availability of Pyopen to hospitals specifying this brand of carbenicillin.**

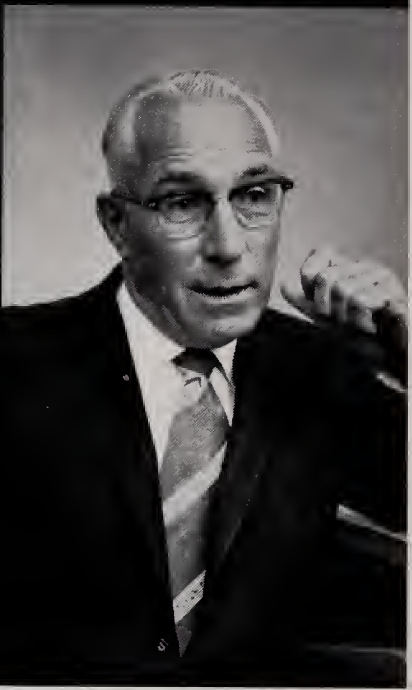
**For additional information about the Beecham-Massengill Total Service Concept see our representative or write to us directly.**

BEECHAM-MASSENGILL PHARMACEUTICALS
Div. of Beecham Inc.
Bristol, Tennessee 37620

**PRESCRIBING INFORMATION** **Indications:** Primarily for treatment of infections due to susceptible strains of *Pseudomonas aeruginosa*, *Proteus* species (particularly indole-positive strains), and certain *Escherichia coli*. Clinical effectiveness has been demonstrated in the following infections when due to these organisms: Urinary tract infections; severe systemic infections and septicemia; acute and chronic respiratory infections (while clinical improvement has been shown, bacteriologic cures cannot be expected in patients with chronic respiratory disease and cystic fibrosis); soft tissue infections. Although PYOPEN (disodium carbenicillin) is indicated primarily in Gram-negative infections, its activity against Gram-positive organisms should be kept in mind when both Gram-positive and Gram-negative organisms are isolated (see Actions). **Note:** During therapy, sensitivity testing should be repeated frequently to detect the possible emergence of resistant organisms. **Actions:** Organisms found to be susceptible *in vitro* include: Gram-Negative Organisms-*Ps. aeruginosa*, *Proteus mirabilis*, *Pr. morganii*, *Pr. rettgeri*, *Pr. vulgaris*, *E. coli*, *Enterobacter* species, *Salmonella* species, *Hemophilus influenzae*, and *Neisseria* species. Gram-Positive Organisms-*Staphylococcus aureus* (nonpenicillinase-producing), *Staph. albus*, *Diplococcus pneumoniae*, Beta-hemolytic streptococci, and *Streptococcus faecalis*. Some newly emerging pathogenic strains of *Herellea*, *Mima*, *Citrobacter*, and *Serratia* have also shown *in vitro* susceptibility. Not stable in the presence of penicillinase. *Klebsiella* species are resistant. Some strains of *Pseudomonas* have developed resistance fairly rapidly. **Contraindications:** Known penicillin allergy. **Warnings:** Serious and occasional fatal hypersensitivity (anaphylactic) reactions have been reported in patients on penicillin therapy. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens. There have been reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, appropriate therapy should be instituted and discontinuance of disodium carbenicillin therapy considered, unless the infection is life threatening and only amenable to disodium carbenicillin therapy. The usual agents (antihistamines, pressor amines, and corticosteroids) should be readily available. **Usage in Pregnancy:** Safety for use in pregnancy has not been established. **Precautions:** As with any other potent agent, it is advisable to check periodically for organ-system dysfunction, including renal, hepatic, and hematopoietic systems, during prolonged therapy. Emergence of resistant organisms, such as *Klebsiella* species and *Serratia* species, which may cause superinfection, should be kept in mind. Each gram contains 4.7 mEq sodium; in patients where sodium restriction is necessary, such as cardiac patients, periodic electrolyte determinations and monitoring of cardiac status should be made. Observe patients with renal impairment for bleeding manifestations and adhere strictly to dosage recommendations. If bleeding manifestations appear, discontinue antibiotic and institute appropriate therapy. As with any penicillin preparation, the possibility of an allergic response, including anaphylaxis, may occur, particularly in a hypersensitive individual. **Administration:** Intramuscular injections should be made well within the body of a relatively large muscle (not into the lower and mid-third of the upper arm), and aspiration is necessary to help avoid inadvertent injection into a blood vessel. May be given by either intravenous injection or intravenous infusion. After reconstitution with Sterile Water for Injection unused portions should be discarded after 24 hours if stored at room temperature, or after 72 hours if refrigerated. **Adverse Reactions:** *Hypersensitivity Reactions*—Skin rashes, eosinophilia, pruritus, urticaria, drug fever, and anaphylactic reactions. *Gastrointestinal Disturbances*—Nausea. *Hemic and Lymphatic Systems*—Hemolytic anemia, thrombocytopenia, leukopenia, neutropenia, in uremic patients receiving high doses (24 gm/day), hemorrhagic manifestations associated with abnormalities of coagulation tests, such as clotting and prothrombin time. *Hepatic and Renal Studies*—SGOT and SGPT elevations have been observed, particularly in children. To date, no clinical manifestations of renal disorders have been demonstrated. *Central Nervous System*—Convulsions or neuromuscular irritability could occur with excessively high serum levels. *Local Reactions*—Pain at the site of injection, sometimes accompanied by induration. Vein Irritation and Thrombophlebitis—particularly when undiluted solution is injected directly into the vein. **How Supplied:** Available in 1 Gm. and 5 Gm. vials.

*Before prescribing or administering, see package circular or PDR.*

# "Drug research gives me the tools that save lives."



*A family doctor looks at new developments in the pharmaceutical industry. And he speculates on the future.*

When I look back at some of my old records, I'm constantly reminded of the changes that have come about in medicine just during the past twenty-five years. Some of the diseases I treated and prayed over in the '40's are found mostly in medical history books now.

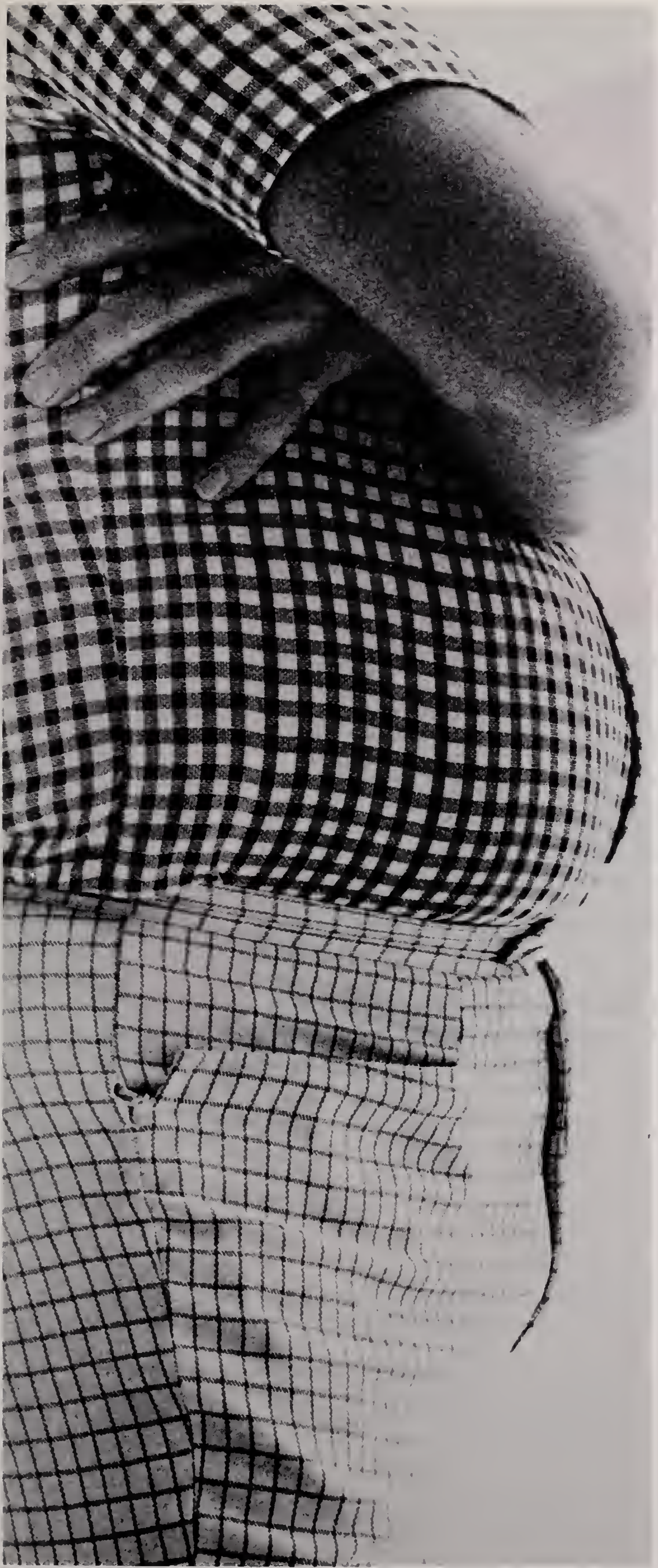
Thanks to drug research and development, we've made substantial gains in the control of cardiovascular disease, diabetes, malaria, mental illness, strep and staph infections, meningitis and a long list of ailments. It seems like only yesterday when a diagnosis of pneumonia was almost the kiss of death. Now, with modern medical techniques and drug therapy, we can offer some real help.

My records on polio, influenza and measles show an unbelievable trend for the better. New vaccines have reduced the toll of these age-old threats dramatically. And I see patients in pain from crippling arthritis helped with new medicinals unknown just a few years ago.

I hear questions about the three billion or so dollars spent by the drug industry in research during the past ten years . . . working on new and better drug products. It does seem like quite a bit of money to spend, and I realize some of it goes into dead ends. That's the problem with research, any research . . . you often don't know where you're going until you get there. I want all the tools I can get to help my patients. I want more drugs and more effective drugs. If they mean less pain, longer lives and more productive careers for those I treat . . . well, that's what really counts.

*Another point of view . . .*
*Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.*

**This advertisement has been reaching consumers thru THE ATLANTIC, FAMILY HEALTH, HARPER'S MAGAZINE, NEWSWEEK, SATURDAY REVIEW, TIME and U.S.NEWS & WORLD REPORT.**



What a waste.

A waste of millions of Americans who stuff themselves with more food than they need.

And boost the risk of serious illness in the process.

The recent White House Conference on Food, Nutrition and Health urged us all to confront this aspect of America's nutrition crisis.

National Dairy Council is confronting it.

Supported by the dairy industry, we sponsor desperately-needed research projects to help us learn more about nutrients, their functions and effects on the human being.

**The vast American waistland.**

We provide program assistance, nutrition information and a communications materials program for people like you who can directly influence what—and how much—Americans eat and drink.

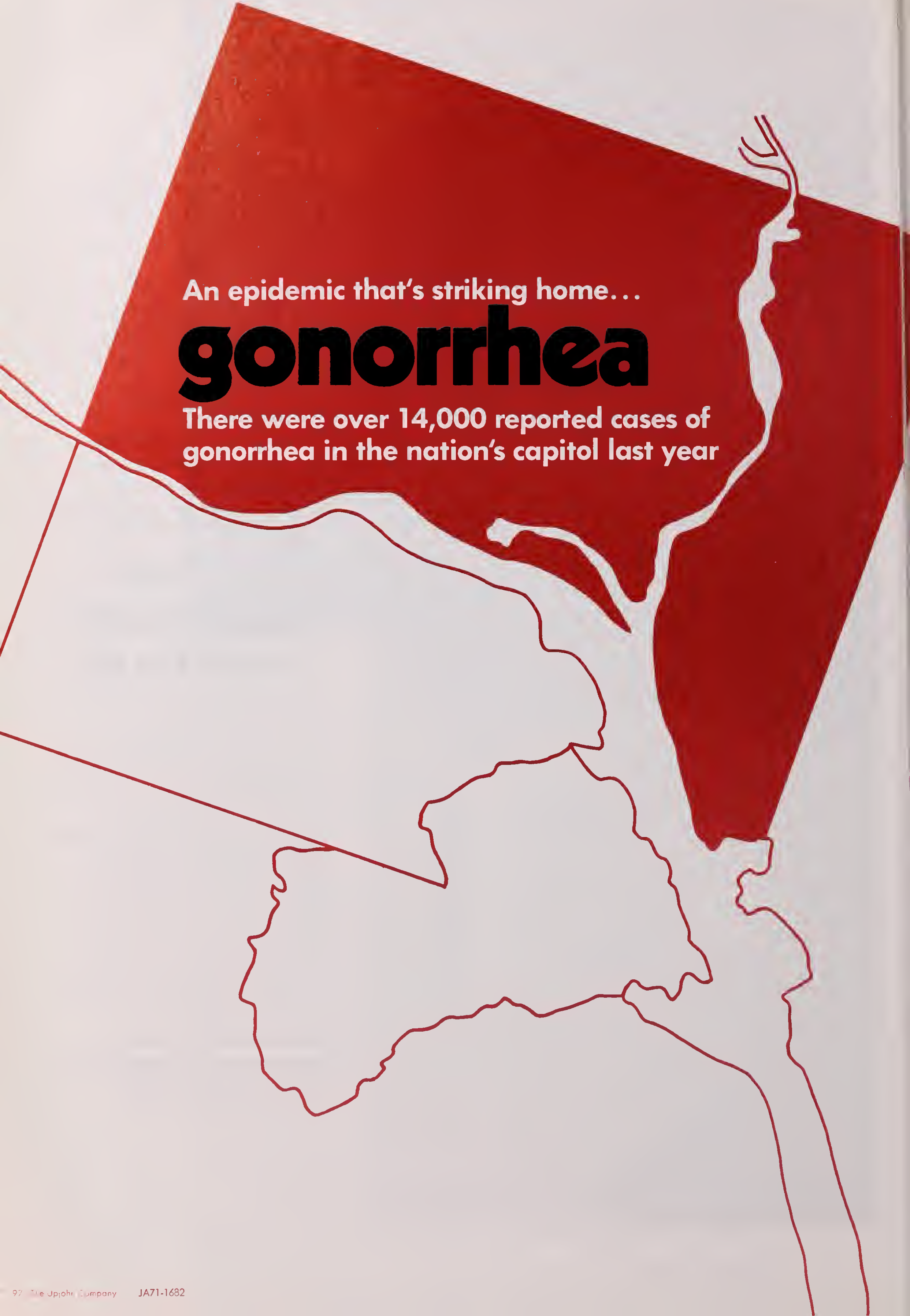
And most important, we maintain a dedicated, highly-professional staff of people who search for the truths in nutrition research and education. And never settle for, anything less.

The vast American waistland.

National Dairy Council is helping to shrink it down to size.

**Dairy Council of Greater Metropolitan Washington, D.C.**

An affiliate of National Dairy Council,
an educational, scientific institution.



An epidemic that's striking home…

# gonorrhea

There were over 14,000 reported cases of gonorrhea in the nation's capitol last year

97 The Upjohn Company

**In the District of Columbia . . . and everywhere else . . .
a new alternative**

NEW **Trobicin®** SPECTINOMYCIN
DIHYDROCHLORIDE, PENTAHYDRATE, UPJOHN

**single-dose treatment for intramuscular use only**

**a chemically distinct antibiotic indicated specifically
for treatment of acute gonorrhea:
in the male–acute urethritis and proctitis
in the female–acute cervicitis and proctitis
when due to susceptible strains of *N. gonorrhoeae***

**High cure rate:*96% of 571 males, 95% of 294 females**
(Dosages, sites of infection, and criteria
for diagnosis and cure are defined on page 3 of advertisement)

**Assurance of a single-dose, physician-controlled treatment schedule**

**No allergic reactions occurred in patients with an alleged history of penicillin sensitivity when treated with Trobicin, although penicillin antibody studies were not performed**

**Active against most strains of Neisseria gonorrhoeae *in vitro***
(M.I.C. 7.5-20 mcg/ml)

**A single two-gram injection produces peak serum concentrations averaging about 100 mcg/ml in one hour**
(average serum concentrations of 15 mcg/ml present 8 hours after dosing)

NOTE: Antibiotics used in high doses for short periods of time to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Since the treatment of syphilis demands prolonged therapy with any effective antibiotic, and since Trobicin is not indicated in the treatment of syphilis, patients being treated for gonorrhea should be closely observed clinically. Monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected. Trobicin is contraindicated in patients previously found hypersensitive to it.

For full prescribing information, including contraindications, warnings and precautions, please see last page of this advertisement.

*Data compiled from reports of 14 investigators.

**Upjohn** The Upjohn Company, Kalamazoo, Michigan 49001

# Trobicin and the gonorrhea challenge

**An accelerating epidemic—**
**a decelerating susceptibility to penicillin**

Gonorrhea is now the most prevalent reported communicable disease in the nation. The estimated number of new cases of gonorrhea in the United States exceeded two million for the first time in 1970. To compound the problems, strains of *N. gonorrhoeae* increasingly resistant to penicillin and other antibiotics are appearing throughout the country. Schedules of treatment which were effective only a few years ago now result in a significant percentage of treatment failure. *In vitro* studies have demonstrated that resistance of *N. gonorrhoeae* may also develop to Trobicin.

Thus, while aqueous Procaine Penicillin G remains the drug of choice for the majority of patients, the need for a non-penicillin, intramuscular antibiotic for acute gonorrhea in the male and female is abundantly clear. Such an antibiotic should be effective following a single intramuscular injection —and it should not demonstrate cross-resistance with penicillin

**Trobicin—a new alternative specifically**
**for the treatment of acute gonorrhea**

Trobicin is indicated in the treatment of acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

**High cure rates:**
**96% of 571 males, 95% of 294 females**

**No allergic reactions occurred in patients with an alleged history of penicillin hypersensitivity when treated with Trobicin, although penicillin antibody studies were not performed.**

**Chemically distinct**

Trobicin is structurally not related to any other antibiotic commonly used to treat gonorrhea.

**The assurance of a single-dose,**
**physician-controlled treatment schedule**

Intramuscular injections should be made deep into the upper outer quadrant of the gluteal muscle.

Adult male: Single 2 gram dose I.M. in acute gonorrheal urethritis. Single 4 gram dose I.M. (should be divided between two gluteal injection sites) in gonorrheal proctitis and in patients being re-treated after failure of previous antibiotic therapy. In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams intramuscularly is preferred.

Adult female: Single 4 gram dose I.M. (should be divided between two gluteal injection sites) in acute gonorrheal cervicitis and proctitis.

Safety for use in pregnancy has not been established, nor has safety for use in infants and children.

Clinical Results with Single-Dose Treatment, Intramuscularly* (Data compiled from reports of 14 investigators**)

| | Dosage | Number of Patients | Number Cured | Percent Cured |
|---|---|---|---|---|
| **Adult Males:** Gonorrheal urethritis | **2 grams** | **475** | **457** | **96%** |
| | **4 grams** | **96** | **93** | **97%** |
| **Adult Females:** Gonorrheal cervicitis | **4 grams** | **294** | **280** | **95%** |

Diagnosis was confirmed by cultural identification of *N. gonorrhoeae* on Thayer-Martin medium in all patients. Criteria for cure: negative culture after at least 2 days post-treatment in males and at least 7 days post-treatment in females. Any positive culture obtained post-treatment was considered evidence of treatment failure even though the follow-up period might have been less than the periods cited above under "criteria for cure" except when the investigator determined that reinfection through additional sexual contacts was likely. Such cases were judged to be reinfections rather than relapses or failures. These cases were regarded as non-evaluatable and were not included in the table above.

The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

---

*4-gram doses were injected in two gluteal sites.

**Medical Research Files, The Upjohn Company

**a chemically distinct antibiotic indicated specifically for treatment of acute gonorrheal urethritis and proctitis in males and cervicitis and proctitis in females when due to susceptible strains of *N. gonorrhoeae***

**new Trobicin®**

STERILE SPECTINOMYCIN DIHYDROCHLORIDE PENTAHYDRATE, UPJOHN

**single-dose treatment for intramuscular use only**

**Sterile Trobicin®**
(spectinomycin dihydrochloride pentahydrate)—For Intramuscular injection: 2 gm vials containing 5 ml when reconstituted with diluent. 4 gm vials containing 10 ml when reconstituted with diluent.

An aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between Trobicin and penicillin.

**Indications:** Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

**Contraindications:** Contraindicated in patients previously found hypersensitive to Trobicin. Not indicated for the treatment of syphilis.

**Warnings:** Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.

*Safety for use in infants, children and pregnant women has not been established.*

**Precautions:** The usual precautions should be observed with atopic individuals. Clinical effectiveness should be monitored to detect evidence of development of resistance of *N. gonorrhoeae*.

**Adverse reactions:** The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

**Dosage and administration:** Keep at 25°C and use within 24 hours after reconstitution with diluent.

*Male*—single 2 gram dose (5 ml) intramuscularly. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.

*Female*—single 4 gram dose (10 ml) intramuscularly.

**How supplied:** *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9%* w/v. Reconstitution yields 5 and 10 ml respectively with a concentration of spectinomycin dihydrochloride pentahydrate equivalent to 400 mg spectinomycin per ml. For intramuscular use only.

*Susceptibility Powder*—for testing *in vitro* susceptibility of *N. gonorrhoeae*.

**Human pharmacology:** Rapidly absorbed after intramuscular injection. A two-gram injection produces peak serum concentrations averaging about 100 mcg/ml at one hour with 15 mcg/ml at 8 hours. A four-gram injection produces peak serum concentrations averaging 160 mcg/ml at two hours with 31 mcg/ml at 8 hours.

*For additional product information, see your Upjohn representative or consult the package insert.* MED-B-1-S (LWB)

**Upjohn**

The Upjohn Company, Kalamazoo, Michigan 49001

U. S. POSTAL SERVICE

## STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

*(Act of August 12, 1970: Section 3685. Title 39. United States Code)*

SEE INSTRUCTIONS ON PAGE 2 (REVERSE)

1. TITLE OF PUBLICATION
Medical Annals of the District Of Columbia

2. DATE OF FILING

3. FREQUENCY OF ISSUE
Monthly

4. LOCATION OF KNOWN OFFICE OF PUBLICATION *(Street, city, county, state, ZIP code) (Not printers)*
Mt. Royal and Guilford Avenues, Baltimore, Maryland 21202

5. LOCATION OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS *(Not printers)*
2007 Eye Street, N.W., Washington, D.C. 20006

6. NAMES AND ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR

PUBLISHER *(Name and address)*
The Medical Society of the District of Columbia, 2007 Eye St., N.W., Washington, D.C.

EDITOR *(Name and address)*
Wallace M. Yater, M.D., 2007 Eye Street, N.W., Washington, D.C. 20006

MANAGER EDITOR *(Name and address)*
F.P. Ferraraccio, 2007 Eye Street, N.W., Washington, D.C. 20006

7. OWNER *(If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)*

| NAME | ADDRESS |
|---|---|
| The Medical Society of D.C. | 2007 Eye Street, N.W., Washington, D.C. 20006 |
| | |
| | |

8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES *(If there are none, so state)*

| NAME | ADDRESS |
|---|---|
| None | |
| | |
| | |
| | |
| | |

9. FOR OPTIONAL COMPLETION BY PUBLISHERS MAILING AT THE REGULAR RATES (Section 132.121, Postal Service Manual)

39 U. S. C. 3626 provides in pertinent part. "No person who would have been entitled to mail matter under former section 4359 of this title shall mail such matter at the rates provided under this subsection unless he files annually with the Postal Service a written request for permission to mail matter at such rates."

In accordance with the provisions of this statute, I hereby request permission to mail the publication named in Item 1 at the reduced postage rates presently authorized by 39 U. S. C. 3626.

(Signature and title of editor, publisher, business manager, or owner)

10. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES *(Section 132.122, Postal Manual)*
*(Check one)*

The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes

☒ Have not changed during preceding 12 months

☐ Have changed during preceding 12 months

*(If changed, publisher must submit explanation of change with this statement.)*

| 11. EXTENT AND NATURE OF CIRCULATION | AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS | ACTUAL NUMBER OF COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE |
|---|---|---|
| A. TOTAL NO. COPIES PRINTED *(Net Press Run)* | 3,312 | 3,302 |
| B. PAID CIRCULATION<br>1. SALES THROUGH DEALERS AND CARRIERS, STREET VENDORS AND COUNTER SALES | | |
| 2. MAIL SUBSCRIPTIONS | 2,705 | 2,740 |
| C. TOTAL PAID CIRCULATION | 2,705 | 2,740 |
| D. FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS<br>1. SAMPLES, COMPLIMENTARY, AND OTHER FREE COPIES | 487 | 519 |
| 2. COPIES DISTRIBUTED TO NEWS AGENTS, BUT NOT SOLD | | |
| E. TOTAL DISTRIBUTION *(Sum of C and D)* | 3,192 | 3,259 |
| F. OFFICE USE, LEFT-OVER, UNACCOUNTED, SPOILED AFTER PRINTING | 120 | 43 |
| G. TOTAL *(Sum of E & F—should equal net press run shown in A)* | 3,312 | 3,302 |

I certify that the statements made by me above are correct and complete.

▶ *(Signature of editor, publisher, business manager, or owner)*

PS Form 3526 July 1971

**HEALTH AUTO-DATA, INC.**
4900 Massachusetts Avenue, N.W.
Washington, D.C. 20016
(202) 966–4300

*Serving the Physician
and the Community*

Health Auto-Data, Inc. (HAD), is organized to provide services to physicians to assist them in their daily routines.

Overhead cost may be reduced by having routine work done at the HAD facility.

We prepare a "patient profile" which may save a considerable amount of time. By having selected tests performed and a medical history taken prior to the physician's initial consultation with the patient, the physician finds it easier and less time-consuming to review the patient's history and analyze the test results.

The medical history is self-administered by patients utilizing an automated console. It passively teaches the patient how to report to a physician, again resulting in a time saving for the physician.

Several semi-automated physiological and laboratory tests are performed.

The entire patient-testing procedure only lasts about an hour and a half! HAD does not interpret the tests. HAD concentrates on the efficient and low-cost performance of routine tests.

The computer-printed reports - - with annotations by the patient's physician - - can serve as records to enclose when making referrals. The records with added diagnosis and recommendations can provide a full report when admitting a patient to a hospital. With progress notes regarding hospital treatment and disposition, the material provides the basis for a hospital summary.

Appointments for patients may be made at the patients' convenience. Call 966–4300 for further information or clip out this form and mail to:

HEALTH AUTO–DATA, INC.
4900 MASSACHUSETTS AVENUE, N.W.
WASHINGTON, D.C. 20016

FROM: DR.________________________________
STREET ADDRESS____________________________
CITY________________________STATE________
ZIP CODE____________________
TELEPHONE NUMBER__________________

☐ SEND LISTING OF SERVICES AND FEES
☐ HAVE A REPRESENTATIVE CALL FOR APPOINTMENT TO EXPLAIN SERVICES
☐ I AM INTERESTED IN A FIRST-HAND INSPECTION OF HAD - - CALL ME TO ARRANGE A VISIT
☐ I AM INTERESTED IN BEING PROCESSED THROUGH HAD FACILITY - - CALL ME TO ARRANGE AN APPOINTMENT SO I CAN INCLUDE YOUR SERIES OF TESTS IN MY ANNUAL PHYSICAL EXAMINATION. I UNDERSTAND THIS IS COMPLIMENTARY

Con-
ven-
ience!

**Dicarbosil®**
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Surgical Supplies and Equipment

*Complete Fitting Service for*
*Ladies and Men*

**KLOMAN SURGICAL SUPPLY CO.**
**1028 19th Street, N.W.**
**Washington, D. C. 20036**

***Telephone:* 223-3444**

- desirable associates
- office space
- ancillary services
- may be obtained thru
-

**A CLASSIFIED ADVERTISEMENT**

-
- in the MEDICAL ANNALS

Miltown®
(meprobamate)

**Still serving...**

**Miltown®**
(meprobamate)

WALLACE PHARMACEUTICALS
Cranbury, N.J. 08512

when an unnerving experience compounds the pain

## the compound analgesic that calms instead of caffeinates

In addition to pain, this patient has experienced anxiety, fear, embarrassment, anger, and frustration. It's very likely that these psychic factors actually accentuated his perception of pain. Surely the last thing he needs is an analgesic containing caffeine. A much more logical choice is Phenaphen with Codeine. It provides a quarter grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can control the pain more effectively. It's no accident that the Phenaphen formulations contain a sedative rather than a stimulant. Don't you agree, Doctor, that psychic overlay is an important factor in most of the accident cases you see?

# Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

*Indications:* Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. *Contraindications:* Hypersensitivity to any of the components. *Precautions:* As with all phenacetin-containing products, excessive or prolonged use should be avoided. *Side effects:* Side effects are uncommon, although nausea, constipation and drowsiness may occur. *Dosage:* Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

A. H. Robins Company, Richmond, Va. A·H·ROBINS

# 'head clear upon arising'

For upper respiratory allergies and infections including the common cold, Dimetapp Extentabs® effectively relieve the stuffiness, drip and congestion all night and all day long on just one Extentab every 12 hours. For most patients drowsiness or overstimulation is unlikely.

**A·H·ROBINS**

A. H. Robins Company
Richmond, Va. 23220

*prescribing information appears on next page*

**Dimetapp Extentabs®**

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

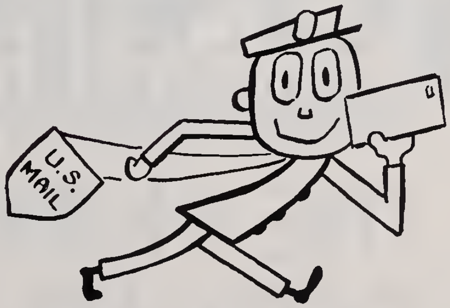
## Dimetapp Extentabs®

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.
CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.
WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.
PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.
ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.
HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

# Help us to serve you better.....

If your mailing label does not contain your zip code, note it on the label and return it to us for correction.

Remember, your Zip Code provides faster, more direct delivery of your journals. Use it on all correspondence, too.



NOW!
PRICE CUT
50%

FOR EVEN
GREATER PATIENT
ECONOMY...

---

**Versapen®-K**
POTASSIUM HETACILLIN
THE AMPICILLIN
DERIVATIVE

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

bp
KONSYL
REG. U.S. PAT. OFF.
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
PLANTAGO OVATA COATING
MADE BY
BURTON, PARSONS & CO.
WASHINGTON D.C. 20027
NET WEIGHT 12 OZ
bp
L.A. FORMULA
REG. U.S. PAT. OFF.
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
MADE BY
BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 14 OZ.

Sugar-free medication for the obese patient.

For the patient who requires maximum palatability.

the safe,
effective ways to promote
normal peristalsis

*in the treatment of constipation or diarrhea*

**Burton, Parsons & Co., Inc.** *Manufacturers of Ethical Pharmaceuticals Since 1885*
▪ WASHINGTON, DC. 20027 ▪ MONTREAL, CANADA ▪ MUNICH, GERMANY

# Aunt Sarah, I love you.

Remember my 10th birthday, when you gave me that funny piece of green paper and everybody made such a fuss over it. (Except me.) Frankly, it was a pretty disappointing present for a kid. I couldn't eat it, couldn't play with it, couldn't wear it—and Mom took it away from me practically the minute I got it.

And every birthday after that (and Christmas, too), you gave me another one of those *Bonds*, you called them. I thought you were pretty gooney.

At least, I never had to guess what I was going to get from good old reliable Aunt Sarah.

And what I got was good old reliable U.S. Savings Bonds.

What I didn't realize then was that you gave me a gift of security for the future. Thanks to you and those Bonds, I had extra funds for college. And they helped when I bought my first new car.

Next week, I'm giving my nephew, Harry, his first U.S. Savings Bond.

I know the kid is gonna think I'm some kind of nut. But, someday . . .

50
THE UNITED STATES OF AMERICA
FIFTY DOLLARS
50
SERIES E
L 0 000 000 000 E

Bonds are safe. If lost, stolen, or destroyed, we replace them. When needed, they can be cashed at your bank. Tax may be deferred until redemption. And always remember, Bonds are a proud way to save.

## Take stock in America.

### Now Bonds pay a bonus at maturity.

The U.S. Government does not pay for this advertisement. It is presented as a public service in cooperation with The Department of the Treasury and The Advertising Council.

# CLASSIFIED ADVERTISEMENTS

**Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.**

***Classified advertisements of a professional nature are free to members.***

## OFFICE SPACE AVAILABLE

EXCELLENT PROFESSIONAL SPACE. 3,200 sq. ft., Connecticut Avenue and Tilden Street, N.W. Long Term Lease at favorable monthly rental. Contact Mrs. Hodge, (202) 966-5334.

FOR RENT. Suite of offices fully equipped. Three examining rooms, three offices and reception room. Shared basis office space and medical assistant. Phone (202) 298-7096, 10 a.m.-5 p.m., Monday–Friday.

FOR SALE OR LEASE: Fully equipped modern medical laboratory, including some automated equipment. Ideal location, over 200 doctors within a 5 block radius. Established over 20 years. Ideal for group of physicians or pathologist. Laboratory already licensed by State of Maryland. All technical help will stay if desired. Building can also be purchased, which has 2,000 sq. ft. of laboratory space. Owner retiring. Box No. 25, Medical Annals of the District of Columbia, 2007 Eye St., N.W., Washington, D.C. 20006.

PHYSICIAN RETIRING from active practice of Internal Medicine. Have 2½ years to run on current lease. Would like to sublet for that period with possibility of taking up 5 year option thereafter. Suite consists of about 900 sq. ft., including nurses office, waiting rooms, consultation room and 3 examining rooms. Kindly contact Harold L. Hirsh, M.D., 2000 N St., N.W., Washington, D.C. 20036, Suite 111, Phone (202) 223-5000.

FOR RENT: 1726 Eye Street, N.W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298-6936.

FOR RENT: Office for 2 doctors, 5323 Connecticut Avenue, N.W. 3 examining rooms, 1 lab., 1 x-ray, and 1 waiting room. Contact Resident-manager, Mr. Adams, (202) 362-7847.

## PHYSICIANS WANTED

PHYSICIAN, Part-time Consultant. Excellent opportunity to develop a basic health program for the National Education Association staff of 1600, including immunization programs, preventive health care, and advisory medical treatment. No physical exams required. Two half days a week. Flexible hours. Call Mrs. Schaeffer, (202) 833–4040 for an appointment.

PHYSICIANS WANTED-IMMEDIATE NEED. For permanent staff and on sessional basis at PRETERM, 1726 Eye Street, N.W., Washington, D.C. 20006. An innovative outpatient clinic for pregnancy termination, counseling and birth control. Surgical and Ob/Gyn. Call or write Benjamin N. Branch, M.D., Medical Director (202) 298-7300.

INTERNIST OR GP. 20 hour week (4 hrs. a day, between 9 a.m. and 5 p.m.) to participate as a member of a geriatric evaluation team for pre admission screening of prospective admission to mental hospital. Physician expected to examine patients and consult with physicians, public health and hospital professionals and families re medical problems of the aged ($16.67 per hour). Contact Division Institutional Care, Prince George's County Health Department, Cheverly, Maryland 20785, Telephone (301) 773-0900.

## PRACTICE FOR SALE

GENERAL PRACTICE, established 40 years in Mt. Pleasant area, fully equipped office, x-ray, EKG, diathermy. Call Mrs. E. H. Markwood, (703) 536-7727 or write 4142 N. River Street, Arlington, Virginia 22207.

## EQUIPMENT FOR SALE

FOR SALE: 1) Green Metal Examining Table-new; 2) Green Scales-Health-O-Meter-new; and 3) Instrument Cabinet-used. Retiring from practice January 1, 1972 but available now. Call (202) 248-8476 for further details.

FOR SALE: Laboratory equipment including Bausch and Lomb binocular clinical microscope, Adams Readacrit Micro-hematocrit centrifuge, Clay-Adams centrifuge, Pelton-Crane autoclave and table. Telephone (202) 296–8170.

## SERVICES

MAKE YOUR WILL. Why delay? Receive 4 Will Forms and a 64-page booklet, "WILLS—How To Make and How To Break Them," written by an attorney. Just send $1.50 to Legal Forms Company, Department 529, 1830 Guardian Building, Detroit, Michigan 48226. (Satisfaction guaranteed.)

## REAL ESTATE

FOR SALE: Syndicate forming. 200 acres timberland Westmoreland County, Virginia. $90,000, good terms. Phone for detailed information. Mr. Clay, (202) 484-3130.

FOR RENT—St. Thomas, Virgin Islands, Sapphire Bay. Modern Apartment on one of the world's prettiest ocean beaches. Glorious sunning, swimming, snorkeling, boating, tennis. For rent by day (4 day minimum), week or month. Full kitchen; maid and linen service. Reasonable rent. Assure yourself of real vacation weather. Write or call owner: Paul Cooper, 7112 Armat Drive, Bethesda, Maryland 20034, (301) 654-3131 (day); 365-7112 (evening).

# INDEX OF ADVERTISERS

**These Advertisers Support Your Journal.**
**Please Give Them Your Support.**

*Page*

**Automated Medical Service**
HEALTH AUTO-DATA, INC. .................... 19

**Bank**
NATIONAL BANK OF WASHINGTON .............. 2

**Dietetic Products**
CAMPBELL SOUP COMPANY ................ T-715
DAIRY COUNCIL OF GREATER WASHINGTON, D.C. ... 13

**Insurance**
MCDERMOTT INSURANCE, INC. .............. T-725
MUTUAL OF OMAHA ......................... 3-C
RUSSELL, MARSH & KENNEDY .............. T-737

**Investment Planning**
SUTER ASSOCIATES RETIREMENT PLANNING COMPANY ............................ T-722

**Equipment and Supplies**
KLOMAN SURGICAL SUPPLY COMPANY ........... 20

**Nurse Registries**
ASSOCIATION OF UNDERGRADUATE AND PRACTICAL NURSE REGISTRY .............. T-736
DISTRICT OF COLUMBIA MANPOWER ADMINISTRATION ........................ T-721

**Pharmaceuticals**
ARCH LABORATORIES ........................ 20
BEECHAM MASSENGILL ................. 10–11, 12
BRISTOL LABORATORIES ..................... 24
BURROUGHS WELLCOME ....................... 9
BURTON PARSON & COMPANY .................. 25
GEIGY PHARMACEUTICALS ..................... 4
ELI LILLY & COMPANY ................. 8, T-727
MERRELL-NATIONAL LABORATORIES ........ 29, 30
W. P. POYTHRESS ....................... T-731
RIKER LABORATORIES ...................... 6-7
A. H. ROBINS COMPANY .... 21, 22-23, T-729, 730
ROCHE LABORATORIES ................ 2-C, 1, 4-C
G. D. SEARLE ..................... T-716, 717
STUART PHARMACEUTICALS ................ T-718
THE UPJOHN COMPANY ... 14-15, 16, T-732-733, 734
WALLACE PHARMACEUTICALS .................. 20

**Pharmacies**
MAXWELL & TENNYSON .................... T-725
PEOPLES DRUG STORES ................... T-720

**Sanitariums**
KALORAMA CONVALESCENT HOME ............ T-736

**T-text**

# The girth control pill

# Tepanil® Ten-tab®

(continuous release form)

**(diethylpropion hydrochloride, N.F.)**

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

**Contraindications:** Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.
**Warning:** Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.
**Adverse Reactions:** Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.
**Convenience of two dosage forms:** TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.), TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

1-3325 (2876)

**Painful night leg cramps...**

unwelcome bedfellow for any patient–including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

**Prescribing Information — Composition:** Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

1-3326 (2877)

**Quinamm**™ Specific therapy for night leg cramps

(quinine sulfate 260 mg., aminophylline 195 mg.)

# Have you protected your most valuable asset?

ou've insured your
e, your home, your
r. But have you
sured your most
luable asset — your
ility to earn an
come?

you were disabled
morrow by a serious
ness or accident how
uld your family be able to meet your
ancial obligations — the payments on your
me, your car, the grocery bill and the
merous other bills that are a regular part
everyday living?

otect your income now with the Disability
come Protection Plan available to you as
member of the Medical Society of the
strict of Columbia.

**PAYS UP TO $225.00 A WEEK**
**when you're sick or hurt and can't practice!**

The benefits provided by this remarkable plan are TAX-FREE, yours to use as you see fit. Payable directly to you regardless of any other coverage you may have.

What's more, your coverage is guaranteed renewable while the program remains in force regardless of the amount of benefits paid to you or any future changes in your health.

And thanks to the mass purchasing power of your Society, you are able to purchase this protection at special rates that save you money.

So get all the facts on this primary insurance protection today! Complete and mail the coupon below. You'll receive free facts without obligation.

*Endorsed by The Society for Over Twenty Successful Years*

UNDERWRITTEN BY

Mutual of Omaha®
The Company that pays

Life Insurance Affiliate: United of Omaha

**Joseph E. Jones, Administrator**
**1666 Connecticut Avenue, N.W.**
**Washington, D. C. 20009 Phone (202) 483-3100**

Please rush me free facts on the special Disability Income Protection plan available to me as a member of the Medical Society of the District of Columbia.

Name________________________________

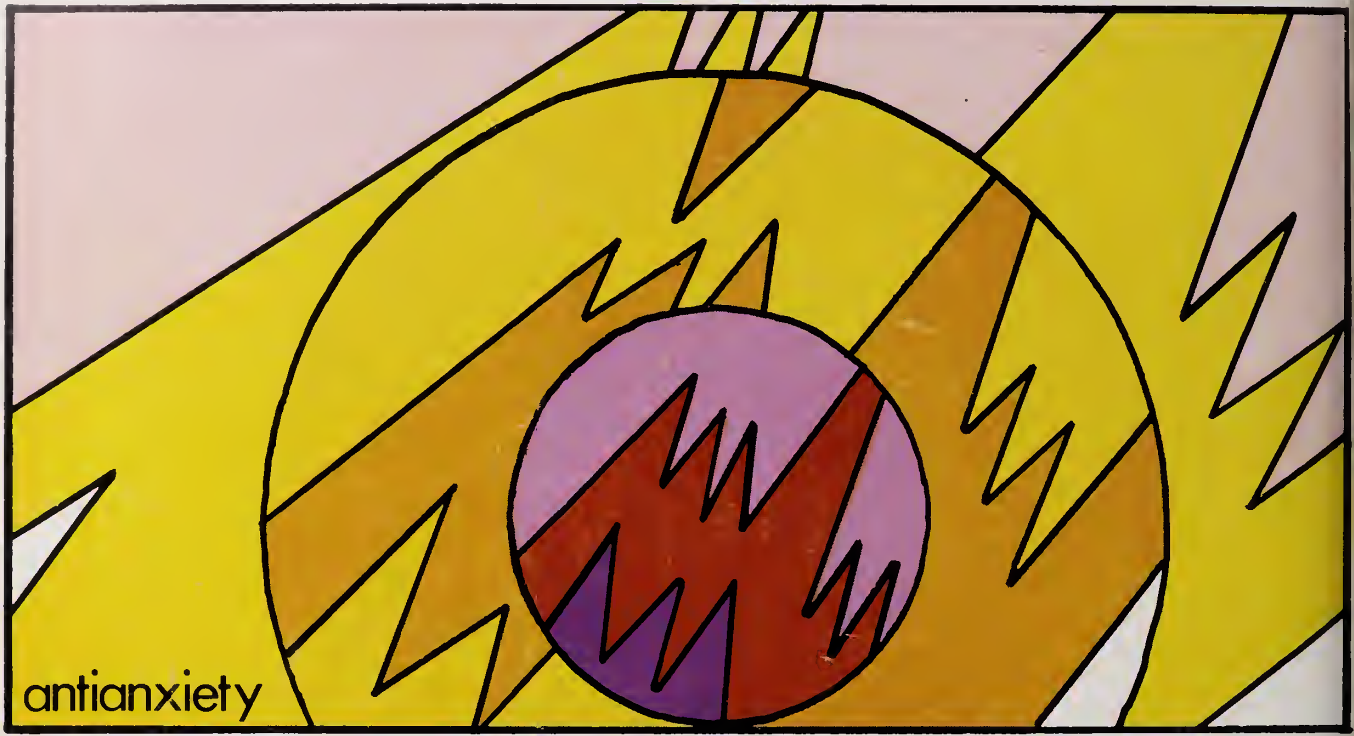
Address________________________________

City________________State__________ZIP__________

anxiety:
a time bomb

Unless "defused," anxiety may build up to an intensity that can overwhelm the patient's inner defenses. Also, in one weakened by chronic illness or surgery, excessive anxiety may provoke or aggravate symptoms and interfere with recovery.

The antianxiety action of Librium (chlordiazepoxide HCl)—used adjunctivel or alone—has demonstrated clinical usefulness in many fields of medical practice where anxiety complicates the patient's condition.



Librium®
(chlordiazepoxide HCl)
5-mg, 10-mg, 25-mg capsules
up to 100 mg daily for severe anxiety

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

*Volume 40 · Number 12 · December 1971*

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
18 FEB 1972

# MEDICAL ANNALS
## of the District of Columbia

THE MEDICAL SOCIETY
of the
DISTRICT OF COLUMBIA

Exchange Office (New Eng. J. Med.) Ex.
Francis A.Countway Library of Medicine
10 Shattuck Street
Boston, Massachusetts 02115

**Layering of Contrast Material in Gallbladder**
Robert G. Filpi, M.D. and Whei-Rung Fu, M.D.
**Marihuana Drug Reaction Among Adolescents**
Sidney Berman, M.D.
**Psychiatric Foster Care Success Story**
Henry P. Ward, M.D.
**Congenital Heart Disease in Children**
Sidney Blumenthal, M.D. and Mary Jane Jesse, M.D.
**Auscultation in Congenital Heart Disease**
Joseph K. Perloff, M.D.
**Spontaneous Peritonitis in an Adult**
Michael Brancaccio, M.D. and
J. Chandler Smith, M.D.
**Postictal Pulmonary Edema**
Antonina N. Amigable, M.D. and
Habib O. Farhoudi, M.D.
**Congenital Cervical Herniation of Lung**
Mandell D. Stearman, M.D., Massoud Majd, M.D.
and Joseph M. Lopresti, M.D.
**Spinal Subdural Hematoma and Hematomyelia Simulating a Spinal Cord Tumor**
Arthur I. Kobrine, M.D., Nilo M. Lopes, M.D.
and Ivan Ciric, M.D.

*Go Greenbrier—'72*

# Patients fell asleep quickl

Dalmane (flurazepam HCl) 30 mg reduced awake time—both before and after falling asleep - by fifty percent of pretreatment values in patients with insomnia.[1,2]

Two sleep laboratory studies recently confirmed findings of earlier studies of this type, namely, that Dalmane 30 mg was effective in patients who had trouble falling asleep, staying asleep or both. One 30-mg capsule of Dalmane usually induced sleep within 22 minutes, decreased the number of awakenings and the wake time after the onset of sleep, and provided 7 to 8 hours of sleep without need to repeat dosage during the night.

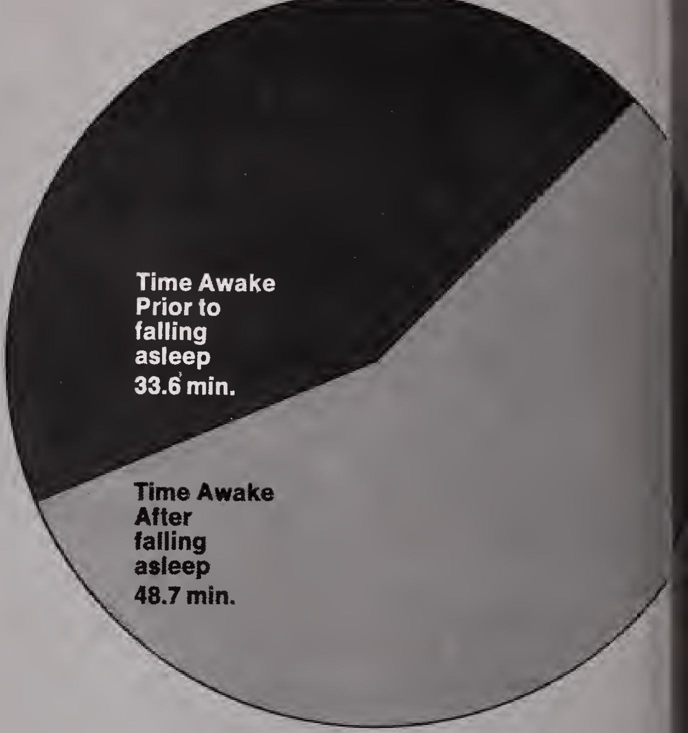
These studies utilized identical protocols and included eight insomniac patients. Sleep laboratory measurements in a limited number of patients are derived from all-night electroencephalographic, electro-oculographic and electromyographic tracings. Unlike traditional methods of evaluation, they are quantitative, reproducible and projectable to large numbers of subjects.

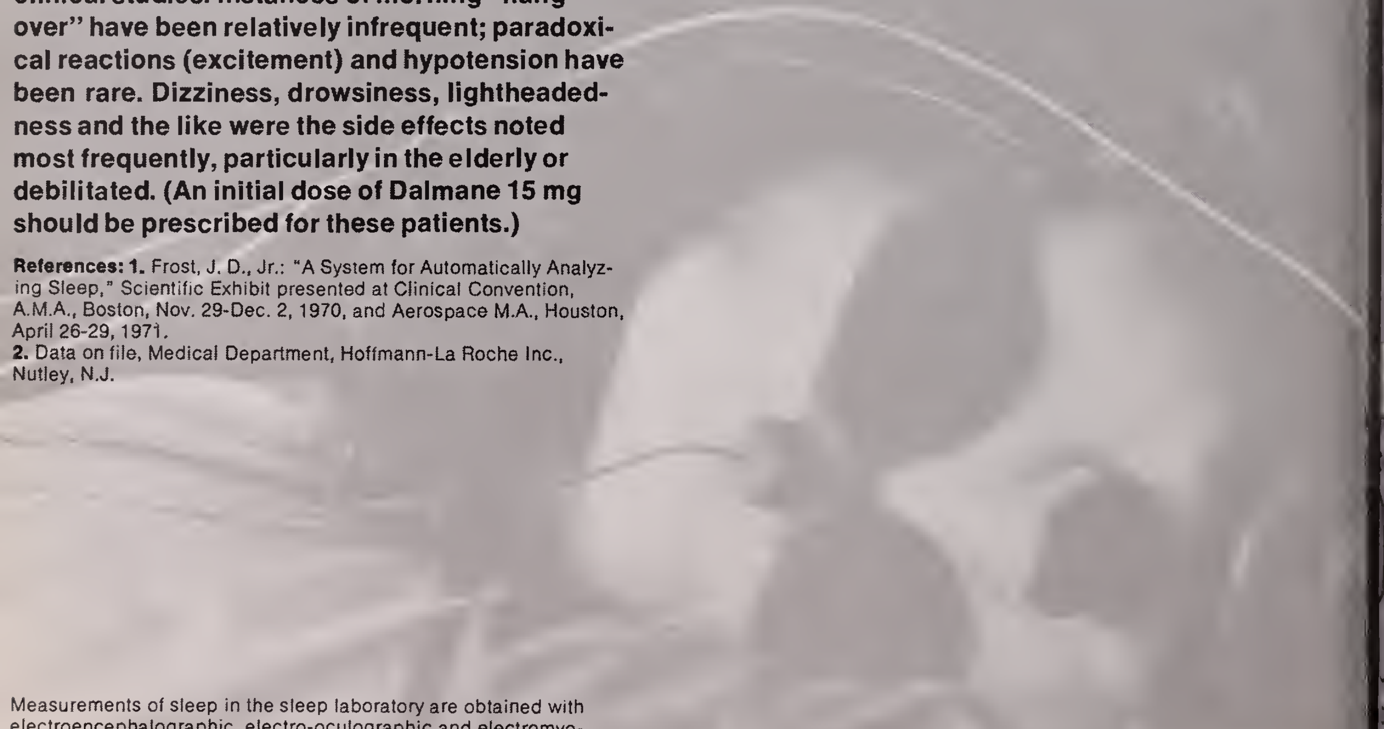
Results shown represent average values in all subjects for the three consecutive nights of placebo administration prior to Dalmane therapy and the seven consecutive nights on Dalmane 30 mg.

Dalmane is also relatively safe, as reported in clinical studies. Instances of morning "hangover" have been relatively infrequent; paradoxical reactions (excitement) and hypotension have been rare. Dizziness, drowsiness, lightheadedness and the like were the side effects noted most frequently, particularly in the elderly or debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

**References: 1.** Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.
**2.** Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.

Before
Dalmane
(flurazepam HCl)



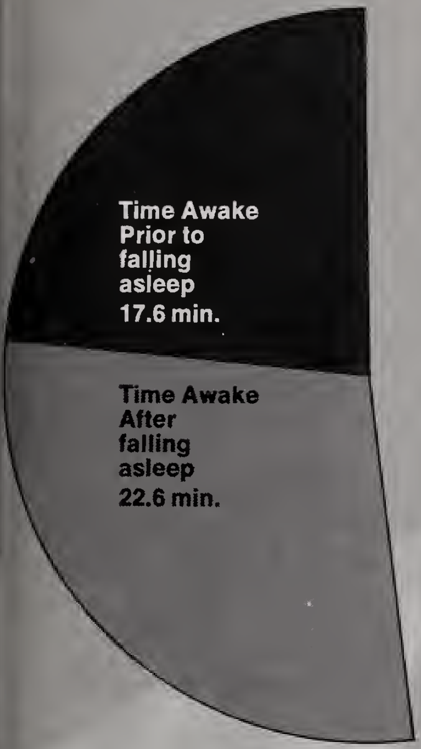


Measurements of sleep in the sleep laboratory are obtained with electroencephalographic, electro-oculographic and electromyographic recordings.

# and slept through the night

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
18 FEB 1972

On
Dalmane
(flurazepam HCl)



ge sleep laboratory measurements in cited studies

| neter | Before Dalmane | On Dalmane |
|---|---|---|
| required to fall asleep | 33.6 min. | 17.6 min. |
| time after onset of sleep | 48.7 min. | 22.6 min. |
| per of wakeful periods after set of sleep | 12.2 | 8.4 |
| sleep time | 420.0 min. | 447.5 min. |
| sleep percent | 88.6 | 94.5 |

## nical effectiveness as oven in the sleep laboratory

# almane®

## urazepam HCl)

**30-mg capsule h.s.—usual adult dosage.**
**15-mg capsule h.s.—initial dosage for**
**rly or debilitated patients.**

**Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

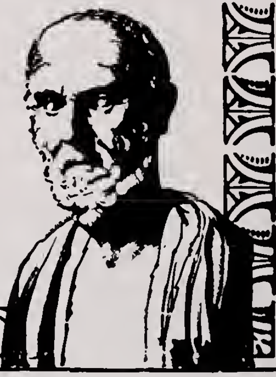
**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



"Healing is a matter of time, but sometimes also of opportunity."

Hippocrates, *Precepts,* Chapt. I

**and so is money-management**

After an initial exploratory examination of your finances by The National Bank of Washington, we can prescribe a course of action that will ensure your fiscal health through good times and bad.

Do you want to prepare for your family's security? There are all kinds of trusts and investments that can be established to suit your particular wants and needs.

Do you want to start a college trust fund to provide for your children's education at a time in your life when you might want to slow down? Our Trust Department knows just how to help you to do this.

How much should you invest in stocks and bonds? Our Investment Department won't give you a rule-of-thumb, but it will give you a plan as individual as you are.

Is the chore of day-to-day banking taking too much of your time or the time of your professional staff? Our bank provides you with prepaid, self-addressed envelopes that allow you to handle your checking or savings accounts right at your desk—at no cost to you.

Are you tired of paying monthly service charges on your checking account? At The National Bank of Washington, if you maintain a minimum balance of $300 in your regular personal checking account, there are no service charges.

Do you want to buy some special professional equipment, attend an international medical meeting overseas, buy another car or boat? At The National Bank of Washington you can get a consumer loan for a mere 8% annual percentage rate.

For *any* questions on money management, consult The National Bank of Washington. Twenty convenient locations. Main office: 14th and G Streets, N.W. 624-3000. Member FDIC.

The National
**BANK OF**
**WASHINGTON**

VOLUME 40 • DECEMBER 1971

**EDITOR**
Wallace M. Yater, M.D.

**ASSOCIATE EDITOR**
Raymond Scalettar, M.D.

**ASSISTANT EDITOR**
Judith E. Perruso

**MANAGING EDITOR**
Francisco P. Ferraraccio

**EDITORIAL BOARD**
Brian Blades, M.D.
Frederic G. Burke, M.D.
J. Keith Cromer, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

**CONSULTING EDITORS**
Colonel Raymond W. Blohm, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Captain Lay M. Fox, MC, USN, Chief of Medicine, U. S. Naval Hospital
Leonard Laster, M.D., Chief, Section on Gastroenterology, National Institute of Arthritis and Metabolic Diseases
William McFarland, Jr., M.D., Associate Chief of Staff for Research and Education, Veterans Administration Hospital
Alvin E. Parrish, M.D., Professor of Medicine, George Washington University School of Medicine
Captain Bruce H. Smith, MC, USN, Director, Armed Forces, Institute of Pathology

**THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA**

**OFFICERS**
Marvin C. Korengold, M.D., President
Darrell C. Crain, M.D., President-elect*
James E. Boland, First Vice President*
Warren D. Brill, Second Vice-President*
Francisco P. Ferraraccio, Secretary-Treasurer*

**EXECUTIVE BOARD**
Henry D. Ecker, M.D. (1971)
William S. McCune, M.D. (1972)
Leslie E. Hedgepath, M.D. (1973)
Frank S. Pellegrini, M.D. (1974)

**DELEGATES TO AMA**
John J. Hughes, M.D.*
C. Willard Camalier, Jr., M.D.*

**LEGAL COUNSEL**
John Lewis Smith, III

---

* Ex officio member of the Executive Board

# MEDICAL ANNALS of the DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to the Editorial Offices, Medical Annals of the District of Columbia, 2007 Eye Street, N. W., Washington, D. C. 20006.

**EXCLUSIVE PUBLICATION:** Articles are accepted for publication on condition that they are contributed solely to this journal.

**MANUSCRIPTS:** Manuscripts must be typewritten, double-spaced, and the original and one carbon copy submitted.

**ILLUSTRATIONS:** Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. Medical Annals will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

**REFERENCES:** References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

**COPYRIGHT:** Matter appearing in the Annals is covered by copyright, but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the Medical Annals of the District of Columbia must have the approval of the Editor.

**REPRINTS:** Reprints may be obtained at cost.

**ADVERTISING:** Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the Annals office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

**SUBSCRIPTIONS:** Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $8.00; Canadian, $8.50; foreign, $9.00, including postage; single copies, 75 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

DU-7019

# Who's afraid of the big bad enema?

**We all are.** But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can — except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents" and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

**Dulcolax®...it's predictable**
bisacodyl

GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 UNDER LICENSE FROM BOEHRINGER INGELHEIM G.M.B.H.

**MEDICAL ANNALS**
**of the District of Columbia**

# *Contents for December*

## SCIENTIFIC ARTICLES

Layering of Contrast Material in the Gallbladder. *Robert G. Filpi, M.D.* and *Whei-Rung Fu, M.D.*, Washington, D.C. 739

Marihuana: A Study of Toxic Drug Reaction Among Adolescents. *Sidney Berman, M.D.*, Washington, D.C. 742

A Psychiatric Foster Care Success Story. *Henry P. Ward, M.D.*, Washington, D.C. 745

Congenital Heart Disease in Children. *Sidney Blumenthal, M.D.* and *Mary Jane Jesse, M.D.*, Miami, Florida. 749

Highlights of Auscultation in Congenital Heart Disease. *Joseph K. Perloff, M.D.*, Washington, D.C. 751

Spontaneous Peritonitis in an Adult. Report of a Case. *Michael Brancaccio, M.D.* and *J. Chandler Smith, M.D.*, Washington, D.C. 753

Postictal Pulmonary Edema. *Antonina N. Amigable, M.D.* and *Habib O. Farhoudi, M.D.*, Washington, D.C. 756

Congenital Cervical Herniation of the Lung. Report of a Case. *Mandell D. Stearman, M.D.*, *Massoud Majd, M.D.* and *Joseph M. LoPresti, M.D.*, Washington, D.C. 759

Spinal Subdural Hematoma and Hematomyelia Simulating a Spinal Cord Tumor. Report of a Case. *Arthur I. Kobrine, M.D.*, Washington, D.C., *Nilo M. Lopes, M.D.* and *Ivan Ciric, M.D.*, Chicago, Illinois 761

## SPECIAL SECTION

1971 Index—The Medical Annals of the District of Columbia 771

## MISCELLANY

President's Page: "We've Just Begun" 769

D.C. Health Notes: No Smoking Week 779

D.C. Mental Health Administration: The District's Outpatient Clinic for Alcoholics 783

New Members 788

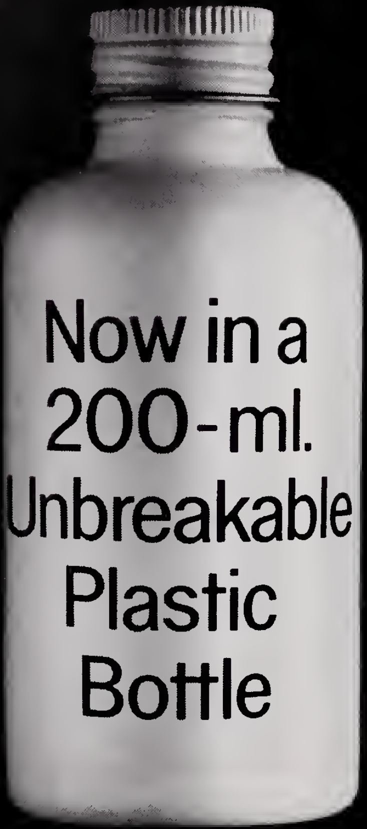
*Medical Annals Staff and Officers of the Medical Society* *Adv.* *3*

*Classified Advertisements* *Adv.* *13*

*Index of Advertisers* *Adv.* *14*

---

COPYRIGHT ©, 1972 BY THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA. *Yearly Subscription, $8.00. Single Number 75¢*
*Second-class postage paid at Baltimore, Md. Published monthly at Mount Royal and Guilford Avenues, Baltimore, Maryland 21202*



Now in a 200-ml. Unbreakable Plastic Bottle

Same price as 150-ml. size*

Two dosage strengths–
125 mg./5 ml.
and
250 mg./5 ml.

V-Cillin K®, Pediatric
potassium phenoxymethyl penicillin

Lilly

100210

*Additional information available to the profession on request.*

Eli Lilly and Company
Indianapolis, Indiana 46206

**Based on Lilly selling price to wholesalers.*

MEDICAL ANNALS
of the District of Columbia

*December 1971*
VOLUME 40 • NUMBER 12

# Layering of Contrast Material in the Gallbladder*

ROBERT G. FILPI, M.D. AND WHEI-RUNG FU, M.D.

LAYERING OF CONTRAST MATERIAL in the gallbladder during intravenous cholangiography is a phenomenon which was well documented in the early radiologic literature concerning this procedure.[1] The authors cautioned that this layering should not be interpreted as pathologic and by no means should be confused with layering of calculi within the gallbladder.

We have recently encountered 3 cases in which this layering phenomenon occurred and are presenting them to re-emphasize it as a normal variation.

## Report of Cases

Case 1. A 55-year-old white woman was admitted to the George Washington University Hospital complaining of intermittent right upper quadrant pain of 8 months' duration. An intravenous cholangiogram revealed layering of contrast material in the gallbladder on an upright spot film. This stratification disappeared following a fatty meal. A mid-stream aortogram and selective right renal arteriogram revealed a large cyst of the upper pole of the right kidney. The cyst was surgically drained.

Case 2. A 29-year-old white woman was admitted with right upper quadrant pain of 2 days' duration which was associated with 2 episodes of vomiting and a low-grade fever. An oral cholecystogram was normal Intravenous cholangiography demonstrated layering of contrast material in the gallbladder on an upright spot film. The layering disappeared following a fatty meal. Because of persistent right upper quadrant abdominal pain and positive duodenal drainage the patient underwent exploratory laparotomy at which time a cholecystectomy and appendectomy were performed. Pathologic examination revealed a normal appendix and gallbladder.

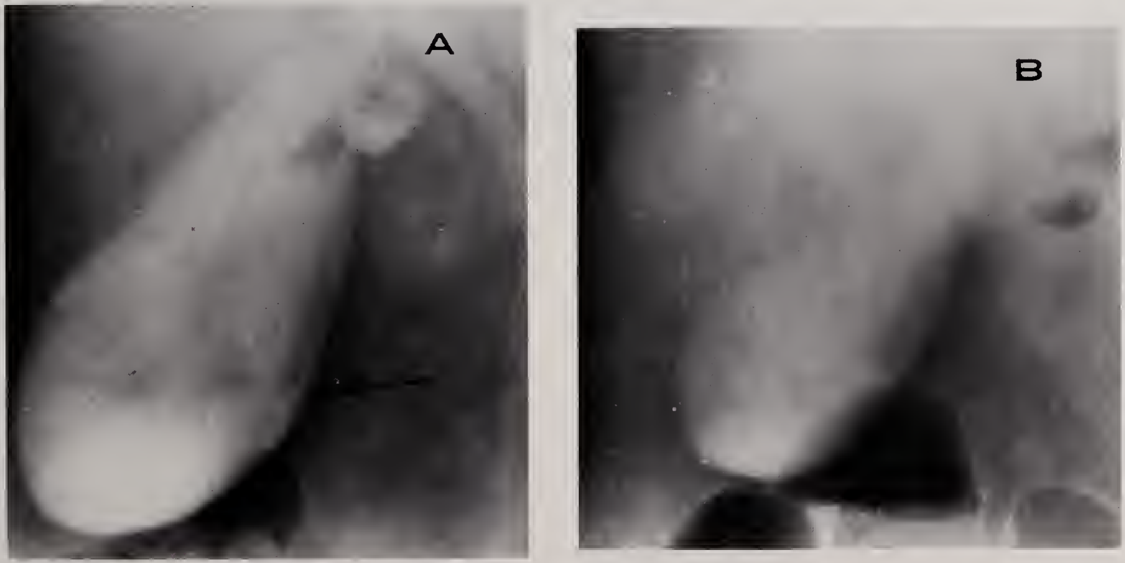


**FIG. 1. Case 1 A. Upright spot film of the gallbladder demonstrating layering of contrast material. Case 1 B. Following a fatty meal the layering is absent on an erect film.**

---

* From the Department of Radiology, The George Washington University Medical Center, Washington, D.C.
Address reprint requests to Dr. Filpi, Department of Radiology, The George Washington University Hospital, 901 23rd Street, N.W., Washington, D.C. 20037.

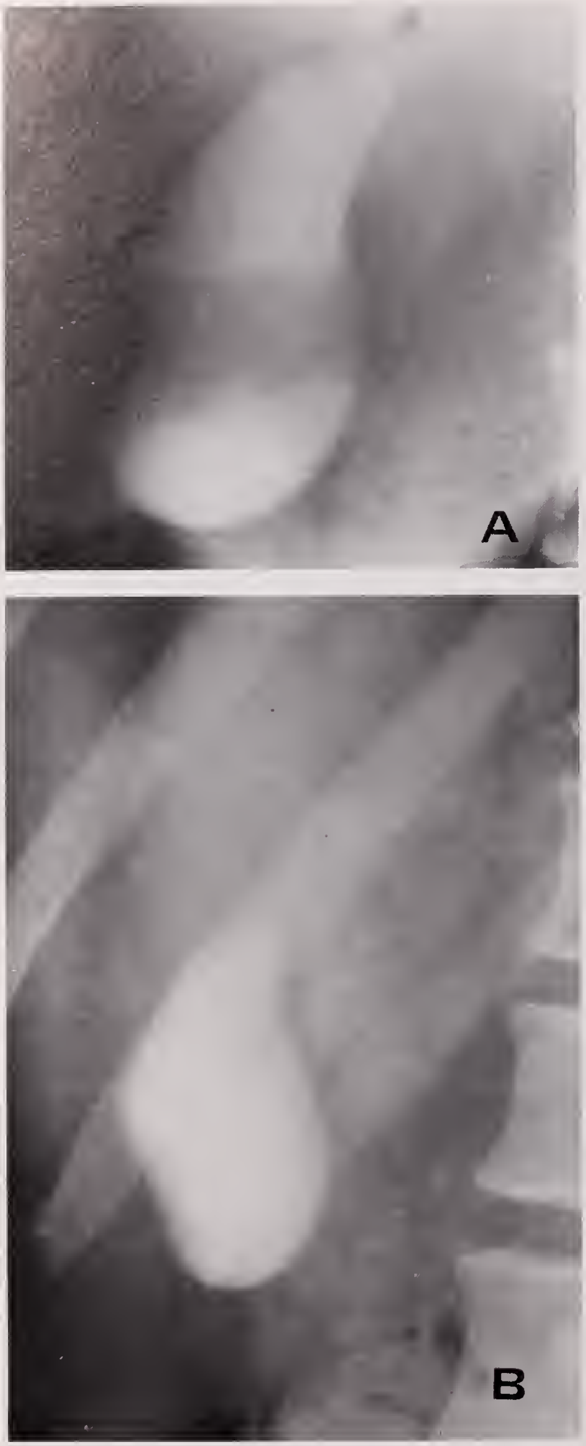


**FIG. 2. Case 2. A. A radiolucent band is present across the body of the gallbladder on an erect spot film. Case 2. B. The radiolucent band has disappeared following a fatty meal.**

Case 3. A 35-year-old negro woman was admitted with a 2 month's history of recurrent diffuse abdominal pain. An upper gastrointestinal series revealed marked deformity of the duodenal bulb with the presence of a pseudodiverticulum. An intravenous cholangiogram revealed layering of contrast material in the gallbladder on upright and lateral decubitus films. The layering disappeared following a fatty meal. The patient was placed on bed rest, bland diet, anticholinergics, and sedatives with improvement in her abdominal pain.

## Discussion

In 1955 Oeser and Frommhold[1] reported on the new contrast medium Biligrafin (Cholografin or sodium iodipamide) and described layer formation in the gallbladder which they attributed to the difference in specific gravity between the bile and the inflowing highly concentrated Biligrafin. Several other authors[2-5] have mentioned this phenomenon and attributed it to slow mixing of the contrast laden bile entering the gallbladder with the bile already present.

Ordinarily this stratification disappears following a fatty meal, but Twigg and Zelna[6] reported a case in which layering was present following a fatty meal. Cholecystectomy on their patient revealed no calculi but changes consistent with chronic cholecystitis. These inflammatory changes were thought to prevent contraction of the gallbladder and therefore no mixing of its contents.

The intravenous cholangiograms on our 3 patients were performed with Meglumine Iodipamide (Cholografin Meglumine). Only 1 of our patients (Case 2) underwent cholecystectomy. Pathologic examination revealed a normal gallbladder.

The incidence of layering of contrast material in the gallbladder is unknown. However, our experience with our 3 cases encountered within 1 year leads us to believe that this is a frequent finding if upright or lateral decubitus films are obtained prior to a fatty meal. It should be emphasized that no pathologic significance be attached to this phenomenon.

## References

1. OESER, H. AND FROMMHOLD, W.: Cholegraphy: The New Contrast Medium Biligrafin. Acta Radiol., 1955, 43, 355.
2. SHEHADI, W. H.: Newer Contrast Media for Use in Cholegraphy. Acta Radiol., 1957, 47, 349.
3. WISE, R. E. AND O'BRIEN, R. G.: Intravenous Cholangiography. Surg. Clin. N. Amer., 1955, 35, 755.
4. NEWMAN, H., DITCHEK, T., AND MASON, R.: Stratification of Bile in the Normal Gallbladder During Intravenous Cholangiography. Amer. J. Dig. Dis., 1968, 13, 779.
5. BERLIN, H. S., POPPEL, M. H., AND STEIN, J.: Intravenous Cholangiography: Pitfalls in Interpretation. Radiology, 1956, 67, 840.
6. TWIGG, H. L. AND ZELNA, A.: Stratification in Intravenous Cholangiography. Radiology, 1963, 80, 774.

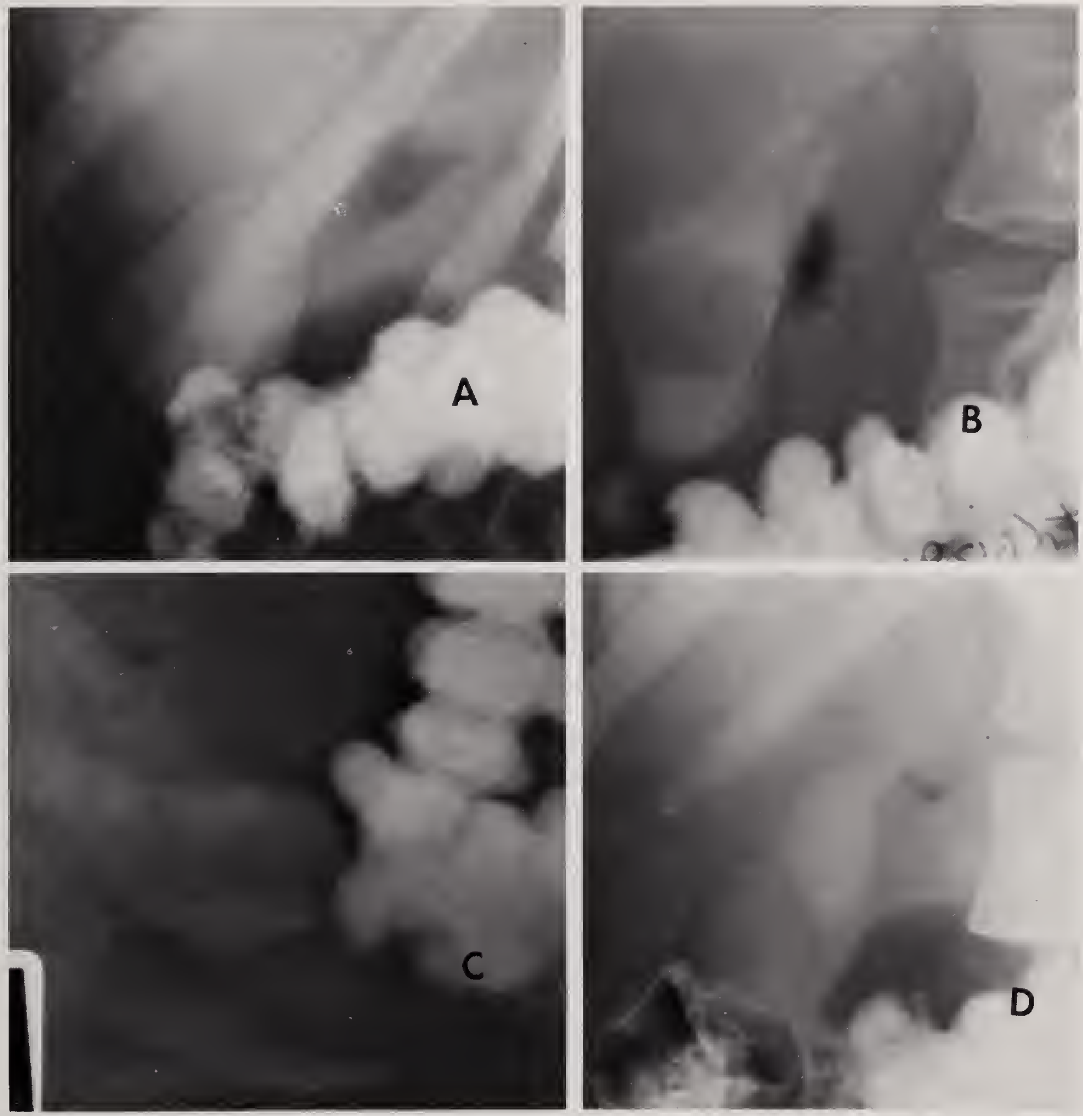


FIG. 3. Case 3. A. Supine film with homogenous opacification of gallbladder. B. Layering of contrast on upright film. C. Layering again demonstrated in right lateral decubitus projection. D. Absence of stratification on upright postfat film.

# Marihuana: A Study of Toxic Drug Reaction Among Adolescents*

SIDNEY BERMAN, M.D.†

THE PROBLEM OF DRUG ABUSE is as old as civilization. Every society has possessed drugs which produce profound effects on mood and feelings. Therefore, there has always been the hazard that certain members of a society will use such drugs to alleviate internal stress or stress caused by external factors. Usually a combination of both factors leads to drug usage.

My experience with youth habituated to drugs consists of adolescents from the middle and upper class of society. Almost all started on marihuana, although several, as a result of group pressure, first took LSD. After marihuana, almost all used other drugs and 1 became addicted to heroin. Most were given generous allowances by their parents which enabled them to easily purchase drugs. When the allowance was withheld by the parents several became successful 'pushers'. Others became 'pushers' because of the narcissistic gratification and position of distinction this gave them. Those who regularly resorted to 'dropping acid and using mescaline' demonstrated obvious clinical toxic organic reactions to these drugs.

Marihuana is the drug of choice because it has certain features which appeal to those adolescents. They are very knowledgeable about the use of this drug. Its reaction is not as severe or as prolonged as that of other drugs. One or 2 reefers or a 'bowl of pot' will create a high-lasting 1½ hours. Often this is combined with wine to heighten the response. The clandestine ritual of getting together is important as they gather in the home of parents who are out for the evening or as they meet to go cruising. Setting up the paraphernalia also is a part of the ritual, as is the sharing of the drug. With marihuana, they know it will last just so long as to permit them to come down, get reasonably well organized, cover up the evidence, and return to their homes.

Two decades ago the problem of drug abuse, except for alcoholism, was a minor one. Yet in each generation of adolescents, a certain group seek activities not consonant with established social patterns.—'zuit suiters, rock, beat, hip'. From about 1965 on the use of hallucinogens, stimulants, sedatives and opiates by adolescents has increased rapidly. Now drug abuse at all levels of society has become pandemic.

Although when adolescence is reached the need to disengage from childhood relationships is an internal psychological process, external factors provide the vehicle by which this is achieved. It would appear that multiple external factors seduce youngsters in large numbers to use drugs—drug companies and physicians, research workers, commercial opportunists, the underworld drug traffickers, and social and family disorganization. These forces have given certain adolescents of this generation a powerful reason to 'cop out' by using drugs.

Additionally, psychological factors make many adolescents vulnerable to the easy availability of drugs. One is the intense impact of the sexual drive upon ego functions. For many with limited capacities for neutralization and sublimation of the sexual drive, drugs alleviate this intense tension. More important is the total overthrow of the superego on parental and social influences to a pathological degree in what I have referred to as the process of alienation.[1] Without the capacity to use their own resources or to develop constructive peer group relationships and new ideals they feel lonely, isolated and depressed. They are taken in by those who use drugs, the only ones who seem to accept them, and their loyalty to the group becomes unshakable. Once this way of life is established, the drugs and peer group values destroy the adolescent's judgment and capacity to master the tasks of adolescence. The drugs accentuate the basic pathology, but they also have a specific toxic effect upon the brain which should not be minimized. The drugs increase oppositionalism to the parents, increase the dependence upon the peer group, and decrease the desire to achieve adult autonomy. The narcissistic identification is solely with the drug users as the only form of object relationship, and this they will not relinquish because they feel they have no other options.

---

* Presented at the scientific meeting of the Washington Chapter, American Academy of Child Psychiatry on June 9, 1971.

† President, American Academy of Child Psychiatry; Clinical Professor of Psychiatry, The George Washington University School of Medicine; Senior Attending Psychiatrist, Children's Hospital, Washington, D.C.

As for the pharmacological effect, I will confine my attention to marihuana because all use this as the basic drug unless they go on to opium. There is general agreement that "At the usual levels of social usage the typical subjective effects are alterations of time and space perception, sense of euphoria, relaxation, well-being and disinhibition, dulling of attention, sense of detachment, fragmentation of thought, impaired immediate memory, an altered sense of identity, exaggerated laughter, and increased suggestibility."[2] Body ego alterations occur, visual imagery becomes vivid and distortions and exaggerations of sight and sound are experienced. Infrequently some adolescents react with a toxic psychotic reaction.

One or 2 reefers will create the desired 'high'. The pharmacological effect is confined largely to the central nervous system. When smoked the effect usually takes place with a few minutes. When ingested the response is less rapid, requiring about ½ to 1 hour to take effect but then lasting for 3 to 5 hours. There usually is an increase of pulse rate, a slight rise of blood pressure, conjunctival vascular congestion, and a slight rise of blood sugar. A dryness of the mouth and throat, nausea, vomiting, and occasional diarrhea have been noted.

With prolonged use of marihuana the subject often becomes indolent and non-productive and shows neglect in vocational, recreational and academic interests. The subjective effects are dependent on a number of factors—the personality of the user, the dose of the drug, routine of administration, and the specific circumstances in which the drug is used.

I believe that there is a strong psychological dependence on the drug which corresponds to the intense passive dependent strivings of the user. All show dreadfully poor social judgment, poor concentration, depression, indifference, and a passive attitude to the demands of reality. School performance always gradually declines. There is an obstinant reluctance to give up the use of marihuana in spite of some adolescents' claims that they can take it or leave it. Most say it is intensely pleasurable and they do not intend to give it up. They accept it as a part of their lives. All patients had defective personality development, and the marihuana supported their passive dependent cravings, alleviated tension, gave them a false sense of well-being, provided peer-group support, and impaired their capacity to master the underlying psychopathology.

Three case vignettes are presented to demonstrate the range of responses to marihuana. I contend that clinical observations over a period of time are less biased and more accurate than any laboratory procedure. They reveal just how this drug is used, the academic, social and family setting in which it is used, the impact it has on the basic personality structure of the user, and the factors which maintain the intense desire to obtain and continue its use.

### Illustrative Cases

Case 1. This boy, seen first at 15 years of age, was on 'pot,' 'acid,' sedatives, and pep pills and was performing chaotically in school despite an I.Q. of 139 on the WISC. He was depressed, completely 'locked-in' with a drug group, a successful pusher, and violently opposed to his parents' guidance. His attitude was that of passivity and discouragement. He was over-protected in his childhood because of a devastating sibling-rivalry relationship. He developed separation anxiety when he was sent to camp at age 6, had no peer-group friends in junior high school, and was taken in by the drug culture upon entering high school. He stated that when 'stoned' he would become glassy-eyed and have slurred speech. Then he could feel the effect of the drug in every part of his body from his toes to his fingers. Bizarre somatic responses have occurred, such as feeling that the bones in his body harden or that his head was loose on his neck as if on a swivel. His head has also felt like a cavity in which the contents, as if in liquid, were thrown about. Colors became bright, unreal, and intense. He described a scene as a buddy drove him and his friends around in the family station wagon. "I never laughed so hard in my life. You couldn't laugh as hard as I did over nothing. We talked to each other and it took about 5 minutes to figure out what I was going to say. I wanted to say the street lights looked like flying saucers. It was so good! I wanted to tell them to watch the lights go by. We went to a place to eat and as I got out of the car I flopped out on the ground." His attitude about its use was "I am not causing any trouble. All I want to do is get 'stoned' even if it should harm me. It is so good! I think my parents are hypocritical and just want to stop me from my pleasure."

Marihuana can be traced in the blood stream for as long as 3 days after a heavy bout of smoking and continue to assert an effect upon the nervous system. Youngsters I have seen appear to have a higher rate of automobile accidents even though they may not have had marihuana for a day or 2. This patient summed up the effects of marihuana succintly when he said, "It fucks up teen-agers and it is a question of, is it a good fuck-up or a bad fuck-up. They haven't made words to describe it. They have to invent a couple of new words for it." He also described a smoking instrument he called a "bong," imported from India which he said was extremely effective. Initially he "took drugs to be accepted and now to get high."

Case 2. This case represents the impact of the chronic intake of a number of hallucinogens with resulting severe ego disorganization. The patient, like so many adolescents, was overprotected by his mother, and his father was not available during his childhood. With the onset of adolescence he felt that there was no place for him in his home or school, and he felt depressed, remote, and passive. In the 9th grade he felt "anonymous" until he was taken in by a friend, a pusher. From the beginning he got "wrecked" on drugs. He used marihuana to be with his buddies and see things in a different light. By the 11th grade he became a revolutionary, dropped 'acid' and mescaline and continued to use 'pot' daily. Up to that time he had been "the control guy" for others who took 'trips'. He notes that marihuana makes him indolent, passive, contented, and indifferent to the real world. A year ago he had a severe reaction to LSD. He saw himself on the ceiling, felt buildings were crashing to the ground, and believed he had been stabbed with green blood flowing from his body. This psychotic state lasted about a week before subsiding. At the present time he is extremely self-absorbed with very little emotional contact with the outside world and dependent on his companions for his care. He also shows an organic psychic disturbance in thinking and affect, making such statements as "I suffer because I feel like suffering" and "my mind sometimes enters space-time ways through the gravity shift." His thoughts are hard to come by, and he has become indifferent to life. He continues to use marihuana daily to relieve the boredom and depression.

Case 3. This is the case of a young woman in her early twenties who ingested chocolate-chip cookies loaded with marihuana and developed an acute panic state. She was married to an insensitive narcissistic young man, and she reacted with depression to this relationship. The marihuana caused a toxic drug reaction. Nothing happened for the first 45 minutes. Then suddenly she got a "nice feeling and giggles." Shortly thereafter this stopped. She noted her mouth was dry and she felt apprehensive. Her husband, also on marihuana, was euphoric, described a green field to other participants, and had a silly look on his face. He spoke "in way out ways" and said he was a mechanical man. She expressed a concern about what was happening to her and developed a paranoid reaction, thinking people were watching them. She wanted to leave the room when she experienced "a rush of feeling" over her entire body and became intensely anxious. Finally she screamed "get me out of here." She was taken to a bed, her legs 'shivering and shaking.' She became panicky, thinking this would never stop. It subsided only to "rush again" on and off for 1½ hours. Her husband held her legs until it gradually cleared up. The patient said the social pressure caused her to take it so that she would not feel excluded from the group.

I have found that the treatment of these adolescents is ever so much more difficult when they are on drugs. In addition to the problem of the management of the basic psychological factors creating the maladjustment, the drugs become a major obstacle to the treatment. The false sense of well-being which the toxic drug reaction causes is so intense that there is a reluctance to give it up. Another factor which makes for difficulty in treatment is the strong bond of loyalty the adolescents feel for their pals who also are on drugs. The pleasure provided by the drugs and the peer-group support are more binding as the desired way of life than the stress and challenge of treatment.

In all forms of psychotherapy with these adolescents the prognosis is not good. No matter who the adolescent is, the parents must be included in the diagnostic assessment as long as they assume responsibility for the treatment. Also, the parents may sabotage the treatment if they are not included. During the treatment of the adolescent the parents also should be seen whether separately or with the patient. Otherwise these adolescents lull their parents and the physician into supporting the drug abuse while making gestures at using treatment.

When seen in an emergency for an acute toxic reaction, no patient should be treated for the drug intoxication without a complete physical examination, and no patient should be discharged without arranging for further treatment. Such an emergency situation always requires a follow-up study and even a period of hospitalization for many who shows a serious chronic maladjustment.

The clinical evidence points to a serious mental health problem for a large segment of adolescents who seek toxic drug-reaction of various types as a way of soothing tensions which must be mastered in the adolescents' passage to adulthood. They would have serious problems in their adjustment to the adolescent phase of development even if various toxic drugs were not available. But the availability of these drugs creates insurmountable problems for our youth and society. To minimize the use of these drugs as a necessary social evil begs the real issue. This is the problem of planning for each adolescent a meaningful objective in life—the opportunity for constructive passage through adolescence. This requires educational and social planning which has relevance for the adolescent. Parents and society must know the dangers of these toxic drugs and must prevent their exploitation by those who profit from our youth's vulnerability to seduction by the world of drugs.

## References

1. BERMAN; S.: Alienation: An Essential Process of the Psychology of Adolescence. J Amer. Acad. Child Psychiat. 1970, 9, 235.
2. Marihuana and Health: A Report to Congress from The Secretary, Department of Health, Education, and Welfare. January 31, 1971, p. 8.

# A Psychiatric Foster Care Success Story

HENRY P. WARD, M.D.*

A FOSTER HOME is distinguished from a nursing home or personal-care home in that the foster home patients are expected to take care of their personal needs, including climbing stairs. They are expected to be able to get to and from the hospital clinics by themselves. Hence, the foster care patient is not a helpless, backward patient; he would be able to function in an ordinary boarding house from a physical standpoint and would do so except for his psychiatric and behavioral difficulties.

In 1964 a foster-care grant was provided for St. Elizabeths Hospital, Washington, D. C. by the efforts of the D. C. Department of Health and the D. C. Department of Welfare. As of May 1, 1971, 601 patients from St. Elizabeths Hospital were living in 203 foster homes. Most of them would undoubtedly still be on the wards of the Hospital if it were not for the foster-care program, a fact of considerable significance to both the patients and the hospital administration.

### Criticism of the Program

There has been much criticism of the foster-care program of the District. The storm of protest reached a peak in the summer of 1970 with a rash of newspaper articles.

For example, "At best, they offer custodial services, which, in most instances, are worse than the patients received in the hospital. The results of placing patients, many of them elderly and chronically ill, in homes lacking even a minimum of professional supervision can only be regarded as a 'frying pan into the fire' procedure."[1] In June, 1970, the D. C. Advisory Committee on Aging criticized the care of elderly patients at the Hospital. Its chairman, Dr. Robert Butler, said, "Foster care invokes in the minds of many the idea of foster family care. However, that is not what is happening to the transferred St. Elizabeths patients; they are not receiving foster home care, but are being abandoned."[2]

Dr. Butler stated in January, 1971, in a statement before the Committee on Health and Welfare, D. C. City Council, "I am distraught that in our nation's capitol, a federal institution, St. Elizabeths Hospital, could indiscriminately 'dump' some 600 vulnerable people with chronic mental illness into the 'community', that is, when translated from the euphemism, into nearly 200 unregulated boarding-house-like tenements called 'foster-care homes' where $4 per day is made available for care that not only often lacks social amenities and medical-nursing coverage but where there are deficiencies in nutrition and security with respect to fires and personal safety. Note also, if you please, that profit comes out of that $4." Elsewhere, Dr. Butler has said that "you can't get very much care for that."

### Another View

In January, 1971 I started working with that portion of the foster-care program connected with Mental Health Area C. My contact with the program was almost exclusively through the activities of the social worker, Mrs. Virginia Gilliland, assigned to the Area C homes. There were about 70 patients in 30 homes during this period. She and some assistants did the bulk of the placing, monitoring, and general administering the day-to-day details of the foster-care program for this segment of the city. She coordinated the funding from the Department of Welfare, the medical care from the relevant services of the hospital, and the assignment and return of the patients.

Knowing that much criticism had been aimed at the program, I anticipated a woefully inadequate situation. To my surprise I learned that the kind of care that I had hoped would develop was already a fact. The patients saw their psychiatrists monthly unless there was some special need for more frequent clinic visits. The facilities of the medical as well as the purely psychiatric staff were readily available to all of the patients. There was a functioning program of unscheduled inspections of the homes every 3 months by a team of staff psychiatrists and nurses. In short, my preconceptions based on the newspaper articles were very wrong, and I thought for a while that there was no place for me at all in the program.

The Home Sponsors were interested in getting help to understand their patients better. Therefore, I initiated a training program for them. A plan was evolved in which the social worker and I would meet with groups of Home Sponsors in the sponsors' home. Each group would be of 4-8 sponsors and would meet for about 2 hours biweekly. We hoped to teach the sponsors how better to care for the patients and how better to manage on the small payment of $4 per day per patient. It was planned to talk about food problems and nutrition, money management, psychiatric difficulties encountered, and administrative news from the hospital that might be relevant to the sponsors.

---

*Medical Officer (Psychiatry), Richardson Division, St. Elizabeths Hospital, 2698 Nichols Avenue, S.E., Congress Heights, D.C. 20032.

The reactions to our meeting were mixed. The great majority of the Home Sponsors were enthusiastic about our meetings, although I came only to the first meeting and refused to return because it seemed to be a waste of time. In general, however, the attendance was good and there were many expressions of gratitude for the meetings.

The sponsors initially asked about patients' psychiatric management. After the meetings became more established, the focus shifted to money matters, with many complaints about the low pay. In response to this, we tried to start some collective helping of each other with very limited success. We initiated an irregularly published newsletter. Some issues dealt with income tax problems, such as how to get larger refunds from the government, where to get help, how to fill out forms, etc. We tried to collect the names of reputable repair men, electricians, plumbers (there have been a lot of stuffed commodes, as you might expect), carpenters, etc., so that other sponsors could be spared the painful process of learning the hard way who was reliable. Some of the sponsors had discovered special ways of stretching the food and maintenance dollars. We encouraged sharing these economic windfalls with each other.

After about 2 months it was evident that we were really trying to get the needs of the sponsors before the District and Hospital authorities, and that we were trying to help them make their money go as far as it could, we heard practically nothing about further financial complaints. The meetings began to take on a much more patient-oriented flavor with much real interest in follow-up of each other's cases and how the previous suggestions worked out. It evolved that 90-minute meetings once a month for each group was about optimal.

## Reactions

The major thing that struck me was that the Home Sponsors were providing excellent care for their patients—far, far better in every sense than they had received at the hospital. The homes in this particular area of the city usually had no more than 4 patients and were clean and cheery.

The patients were much more active and productive than they had been in the hospital. They all did something more in the home than previously to contribute to their own care. They dreaded the return to the hospital—and small wonder. The sponsors were warm, dedicated people who could not have been more suited for the job. They frequently gave a story of having lost a loved relative and resolved some of their grief by starting to take in Foster-Care patients. They looked on their patients as members of the family. The extraordinary actions they would make on behalf of their patients was truly remarkable. If a patient had to return to the hospital for some reason he would exhibit an interest that was 'light-years' beyond the money-grubbing, profitering, caricature out of Dickens that has been implied by some critics. Clearly, the conditions described by Dr. Butler and others did not apply to the Area C sector of the program.

## Evaluation

It became quite evident that I was involved in a program that was working smoothly. The Home Sponsors were doing exactly what they were supposed to do. In fact, the patients were getting better care than anyone at the Hospital had any idea. From time to time a staff member would accompany the social worker and myself. They were uniformly amazed at the care, the clinical improvement of the patient, and the desirability of the placement. In general, there had previously been a prejudice against placing patients because they would not get the proper care that was given in the Hospital; paradoxically, this idea persisted side by side with the awareness of the grave deficiencies of the care in any chronic psychiatric hospital.

One of the problems I had to face was that the sponsors did not need much of the help I was willing to offer. Yet it was clear that my efforts were having an important effect. If it wasn't psychiatric know-how that they were looking for, what was I doing that improved the situation? The answer is complex.

The major contribution was that my presence indicated to the sponsors that their work was being appreciated by someone. Never before had they been "given" anything. They had been inspected, they had been used, but there had never been a continuing means of conveying appreciation of their efforts. The meetings also gave the sponsors a forum for their complaints, but even more importantly, a forum for their accomplishments. In the process they got to know each other to swap ideas, and to compare themselves with and to give support to each other. Much of the feeling of being alone in a bureaucracy was diminished.

Occasionally I would be able to bring some freshness of approach to a psychiatric problem. By the same token, I was occasionally enlightened by the sponsors about some new solution to an old problem. The delicacy and sensitivity exhibited by the sponsors in their manipulation of rewards with their patients could easily supply a new chapter in any new book on behavior modification.

It was immediately apparent that the homes I was looking at were not the ones the critics were talking about. It is true that there were no fire-emergency plans posted in the front hall—and I would welcome such plans. But I do not have such plans in my own home, nor do any of my friends or acquaintances to my knowledge. The food is cooked by the sponsors for the patients and for themselves. All eat together, a fact that keeps the quality at a very high level. The rooms are cheery and bright because the sponsors care what their own homes look like.

It is true that there are a few homes in the Area C program that raise some questions to the bureaucrat. In 1 home the sponsor and patient (only 1 in this home) are both eccentric to say the least, but they get along together very well. Their deficiencies apparently do not overlap. It is a certainty that without each other they would both be in the hospital or in separate foster homes. By no rigid set of rules and standards could this symbiosis be tolerated. But it works very well and is testament to the desirability of clinical judgment entering into the authorization of Foster Home Sponsors. The administrators of the program know full well the deficiencies of this sponsor, the peculiarities of the situation, and the need for a watchful eye. However, with all these things taken into account it is very much to their credit that they risk criticism by allowing such an unorthodox arrangement.

## Considerations for the Future

At the time of writing this report there are several groups considering guidelines or minimal criteria for foster homes. From the experience with the Area C homes a few ideas have emerged that might be of some value.

1. The primary reason that the Area C program has been so free of the criticism leveled at other groups is because of the size of the homes. Two of the homes have 6 patients each. The remainder are with 4 or fewer patients. Because of the small size the problems of poor nutrition are minimized. After all, the sponsor eats with the patients as a family. Because of the size there is excellent awareness of the patients' up-to-the-minute needs. A sick or lethargic patient, a patient who wanders off, a patient who just begins to show a change in his psychotic thinking—all these are picked up quickly and there is virtually no danger of such patients being "lost in the shuffle" for the simple reason that there is no shuffle. I think any sponsor with more than 5 or 6 patients is unable to give sufficient attention to each patient. With more than that the sponsor becomes transformed into an apartment "super" or possibly a warden.

2. It is essential that there be a clear delineation of authority and responsibility. It is unbelieveable how many agencies are involved in the care of each patient. The opportunities for "buck-passing" are legion. Either the doctor in charge of the patient should have the authority to do what is necessary to care for the patient or the doctor should be used only as a doctor, and the social agency with the power to do what is necessary should be held responsible for the care and welfare of the patient.

3. Any criteria for foster homes should be flexible enough to allow for the individual situations that arise and are appropriate. Most of our patients have not read the textbooks. Hence it is very hard to find the patients who fit neatly into the "problems" for which we have solutions. The typical patient is extremely rare. Most of our patients' problems are incredibly individual and defy easy solution. Detailed and rigid rules that cannot be bent if the patient can thereby be helped amount to no more than 'nit-picking' obstacles.

4. Enough money should be supplied the Home Sponsors so that they do not lose money by caring for patients that would otherwise have to be maintained in the local state hospital. It is true that some people have tried to reap a large profit from the misfortunes of such patients. At the current rate it is virtually impossible to get rich caring for these patients. Anyone who goes into this business for the primary purpose of making money is at best a very poor business man unless he can be responsible for large numbers of patients. Again, the best safeguard is to keep the size of the homes small.

## Summary

Despite much criticism of the foster care program for the psychiatric patients from St. Elizabeths Hospital, there is at least 1 section of the city for which the program is functioning very well, the homes in Area C.

It is important to note this exception because the unfavorable publicity is usually applied across the board to the whole program. This would be grossly unfair to those in Area C and the others involved in furnishing care of very high calibre to the elderly and other foster-care patients.

The freedom from the abuses described by critics is ascribed to the low number of patients in each Area C foster-care home. If each home has 4 or fewer patients there are many reasons to believe that the quality of foster-care will be at a high level. The degree of personal involvement of the sponsor is high, and the profit motive has been minimized as a corrupting factor.

## References

1. Washington Post, June 25, 1970. Letter to Editor by ARNOLD B. BARACH, President, District of Columbia Mental Health Association.
2. Washington Star, June 6, 1970.
3. Washington News, July 7, 1970.

# Congenital Heart Disease in Children[*]

SIDNEY BLUMENTHAL, M.D.[†] AND
MARY JANE JESSE, M.D.[‡]

THE PHYSICIAN RENDERING primary care has a significant role to play in the management of children with congenital heart disease. He decides when a child should be referred to a pediatric cardiologist or center for definitive diagnostic tests and reviews their recommendations with the parents in order to implement an optimal therapeutic regimen. This necessitates a background of basic physiology and the diagnostic features of the common congenital cardiac lesions, as well as current knowledge of the natural history and results of surgical intervention. His role should be active rather than passive.

The most common lesions seen in older children include ventricular and atrial septal defects (VSD, ASD), patent ductus arteriosus (PDA), pulmonic stenosis with intact septum, tetralogy of Fallot, coarctation of the aorta, and aortic stenosis. More complicated lesions are rare, and management has usually begun in infancy.

It is convenient to categorize patients into severity groups dependent upon the natural history and results of surgery, e.g., mild (excellent prognosis, surgery not required), moderate (expert opinions differ, surgery dependent upon evaluation of patient's general status), severe (surgery definitely indicated), inoperable (surgical mortality unacceptable).

Some lesions result in an increased volume of blood presented to the ventricle resulting in "volume work" (VSD, ASD, PDA) while in others, the ventricle must perform increased "pressure" work to overcome resistance (pulmonic or aortic stenosis, coarctation of aorta, left to right shunts complicated by pulmonary vascular obstructive disease).

## Ventricular Septal Defect

Typical findings in VSD include a thrill in the fourth left interspace and a loud, rough, holosystolic murmur in that area. The natural history of this defect varies with the severity of the hemodynamic abnormality. The clinical course is dependent on the magnitude of pulmonary blood flow and reactivity of the pulmonary vascular bed. The severity of the defects are classified in table I.

TABLE I:
Ventricular Septal Defects
Severity Classification

| | $Q_p/Q_s$ | $P_p/P_s$ |
|---|---|---|
| Mild | $< 1.5$ | $< 0.5$ |
| Moderate | $1.4-2.2$ | $< 0.5$ |
| Severe | $> 2.2$ | $> 0.5$ |
| Inoperable | $< 1.5$ | $1.0$ |

$Q_p$ = Pulmonary Blood Flow.
$Q_s$ = Systemic Blood Flow.
$p_p$ = Pulmonary Artery Pressure.
$P_s$ = Systemic Blood Pressure.

Indications for early cardiac catheterization are exercise intolerance, cardiac enlargement, congestive heart failure, or evidence of right ventricular enlargement. If none of these problems is present, diagnostic studies are done electively after 5 years of age. Surgery is curative unless the defect is incompletely closed or heart block is induced.

## Atrial Septal Defect

Classical findings in atrial septal defect are a parasternal impact, an ejection systolic murmur at the second left interspace, a widely split, fixed $S_2$, and ECG evidence of right ventricular enlargement or rR′ pattern in the right precordial leads with roentgen evidence of cardiomegaly and increased pulmonary vascular markings. Surgery is indicated unless the defect is very small and the ratio of pulmonic to systemic blood flow is less than 1.5, or severe pulmonary vascular obstruction has resulted in a right to left shunt with cyanosis. Surgical mortality in operable patients is less then 1%, and the result is curative.

## Patent Ductus Arteriousus

Patent ductus arteriosus is characterized by a crescendo systolic-decrescendo diastolic machinery murmur. Cardiac catheterization is indicated only if the murmur is atypical, or there is evidence of right ventricular enlargement. Surgery is indicated in symptomatic children and, electively, in all patients at about 4 years of age. Operative mortality is less than 1%. Correction is contraindicated if there is cyanosis due to a right-to-left shunt.

---

[*] Submitted to MEDICAL ANNALS by the Washington Heart Association.

[†] Department of Pediatrics, University of Miami, Miami, Florida.

[‡] Department of Pediatrics, University of Miami, Miami, Florida.

### Pulmonic Stenosis

The findings in pulmonic stenosis include a thrill and a rough ejection systolic murmur in the second left interspace. The lesion is characterized as mild if the peak systolic gradient from right ventricle to pulmonary artery is less than 50 mm Hg, and severe, if the peak systolic gradient is greater than 80 mm Hg. Gradients from 50 to 80 mm Hg are classified as being moderate. Cardiac catheterization is performed electively after 5 years of age and earlier if there is clinically detectable cyanosis, cardiac enlargement, or ECG evidence of increasing RVE. If RV "strain" pattern is present, diagnostic study is mandatory as an emergency procedure. Operative mortality is less than 1%, and surgical correction relieves the obstruction.

### Aortic Stenosis

Congenital aortic stenosis results in a thrill and ejection systolic murmur in the second right intercostal space. The obstruction may be valvar, subvalvar, or supravalvar. Severe obstruction may cause angina, syncope, electrocardiographic evidence of left ventricular strain, and even sudden death. Unfortunately, severe pressure loads on the left ventricle may occur without evidence of symptoms, abnormal ECG, or chest film. Indications for diagnostic study are urgent if the clinical diagnosis is clear, and angina, syncope, cardiomegaly, or a left ventricular "strain" pattern are present. In the asymptomatic child with a typical murmur and thrill, elective catheterization is indicated after 5 years of age.

Severity is judged as mild when the peak systolic gradient from left ventricle to aorta is less than 65 mm Hg; severe, when the peak systolic gradient is greater than 80 mm Hg, or LV "strain" pattern is present. A moderate category includes those with gradients between 65 and 80 mm Hg, and without an ECG "strain" pattern.

The operation is essentially palliative. Residual aortic stenosis is not uncommon, and late calcific aortic stenosis is common. Aortic insufficiency is not a rare complication, but if mild may be tolerated well through childhood and adolescence. Ultimate valve replacement may be necessary.

### Coarctation of the Aorta

Coarctation of the aorta is diagnosed on clinical grounds by the presence of a differential in blood pressure between the upper and lower extremities. Cardiac catheterization is not indicated unless there is a complicating lesion. Indication for early surgery is the presence of severe hypertension or ECG evidence of left ventricular enlargement, otherwise, correction should be performed electively between 6 and 12 years of age. The result is curative.

### Tetralogy of Fallot

Tetralogy of Fallot is characterized by a large ventricular septal defect and varying degrees of right ventricular outflow obstruction resulting in RV pressures at or near systemic levels and cyanosis due to right-to-left shunting through the septal defect. The outstanding symptom is decreased exercise tolerance. Sudden decreases in arterial oxygen saturation result in hypoxic spells (increased cyanosis, irritability, and air-hunger) and may be lethal. Cardiac catheterization to delineate the anatomy is indicated in all patients in whom surgery is contemplated. Two types of surgical approach are available: palliative shunting procedures, or intracardiac repair with closure of the septal defect and relief of outflow tract obstruction.

If the patient is severely symptomatic before the age of 5 years, a shunting procedure is indicated. Intracardiac repair is indicated in the severely symptomatic child over 5 years of age and electively after 8 years of age. Palliative shunting procedures in children over 5 years of age have a low mortality rate and those with good results usually remain satisfactory for 5-10 years. Intracardiac repair has been associated with a diminishing mortality rate that is now 7 to 10% in many large centers. The long-term results are most promising. Five and ten-year followups have been excellent in those in whom adequate repair has been achieved.

# Highlights of Auscultation in Congenital Heart Disease*

JOSEPH K. PERLOFF, M.D.†

*The pulmonary orifice.* The midsystolic murmur of isolated congenital valvular pulmonic stenosis is typically loudest in the second left intercostal space and radiates upward and to the left. Since length of the murmur varies directly with the degree of obstruction, in mild pulmonic stenosis the murmur ends before both components of the second heart sound, whereas in severe pulmonic stenosis the murmur goes through aortic closure but necessarily ends before the delayed soft or inaudible sound of pulmonary valve closure. The murmur is introduced by a pulmonic ejection sound which often distinctively waxes with expiration and wanes with inspiration. Severe obstruction is associated with powerful right atrial contraction which distends the right ventricle in presystole and in so doing generates an atrial or fourth heart sound. Specific attention should be called to the systolic murmur that accompanies stenosis of the pulmonary artery and its branches, a congenital malformation that often follows maternal rubella. These murmurs are widely distributed in the right side of the chest, axilla, and back, and must be sought by auscultation at non-precordial sites during quiet respiration.

When one speaks of pulmonary regurgitation, the high-frequency blowing Graham-Steell murmur comes to mind. However, pulmonary regurgitation may occur without pulmonary hypertension when there is a congenital or acquired anatomic defect of the valve itself, and this murmur differs from that of Graham-Steell. The murmur begins at an interval after the second heart sound, is crescendo-decresendo in shape, ends well before the next first heart sound, and is low to medium pitched since a low diastolic pressure in the pulmonary trunk results in a low rate of regurgitant flow.

*The atrial septum.* Atrial septal defect can be a readily diagnosed congenital anomaly, although from an auscultatory point of view the malformation is often overlooked because of the relatively inconspicuous murmur. It should be borne in mind that the defect itself is acoustically silent and that the shunt is diastolic. When the right ventricle ejects the large stroke volume accumulated in diastole a relatively short, grade 2-3 pulmonic systolic murmur is generated. Since the right ventricle takes longer to expel its large stroke volume the second component of the second heart sound (pulmonary closure) is delayed; furthermore, the physiology of the circulation in atrial septal defect results in fixed splitting of the second heart sound, which means that the split remains unchanged during respiration.

The soft murmur of atrial septal defect may be mistaken for an innocent systolic murmur, especially in children. However, the usual innocent murmur is a vibratory, buzzing, pure to medium frequency event that is best heard along the lower sternal edge and toward the apex and is accompanied by normal splitting of the second heart sound. In addition, complete right bundle-branch-block is associated with wide splitting of the second heart sound but usually not with fixed splitting and hence can be distinguished from the wide, fixed-splitting of the atrial septal defect.

*The ventricular septum.* The typical holosystolic left sternal-edge murmur of ventricular septal defect is well known. Progressive pulmonary hypertension decreases the left-to-right shunt and shortens the murmur; when the shunt is reversed (Eisenmenger's complex), the murmur through the defect is abolished. It is important to recognize that an early systolic murmur can also occur with a very small non-pulmonary hypertensive ventricular septal defect in which the shunt is interrupted in late systole. Such murmurs are soft, pure, of high frequency, and quite localized at the mid to lower left sternal edge; as times goes on these murmurs may disappear because of spontaneous closure of the defect.

*Fallot's tetralogy.* This commonest of the cyanotic congenital cardiac defects above the age of 4 years is a large ventricular septal defect upon which varying degrees of pulmonic stenosis are imposed. Progressive right ventricular outflow obstruction decreases the left to right interventricular shunt, shortens, and finally abolishes the holosystolic murmur, leaving an isolated midsystolic murmur of pulmonic stenosis. As obstruction increases further, right ventricular blood is shunted through the ventricular septal defect into the aorta; accordingly, pulmonary flow decreases, cyanosis increases, and the pulmonic stenotic murmur progressively shortens and softens, disappearing completely with pulmonary atresia.

---

* Submitted to MEDICAL ANNALS by the Washington Heart Association.

† Professor of Medicine, Division of Cardiology, Georgetown University School of Medicine, 3900 Reservoir Road, N.W., Washington, D.C. 20007.

*The great vessels.* When an uncomplicated patent ductus arteriosus joins the great vessels a characteristic continuous machinery murmur 'peaks' around the second heart sound and is maximal at the left base. Several words of caution are appropriate. Occasionally a loud venous hum in young children occurs below the clavicles and is mistaken for patent ductus arteriosus; this error can be avoided by compressing the deep jugular veins, a maneuver that abolishes the hum. In large patent ductus, progressive pulmonary hypertension decreases the left to right shunt so that the continuous murmur shortens, then becomes systolic, and when the shunt is reversed, disappears entirely. At this point the recognition of patent ductus does not depend upon auscultation; instead, the presence of differential cyanosis (blue toes and pink fingers) makes the diagnosis.

## The Myocardium

***Hypertrophy.*** Increased force of atrial contraction usually distends a hypertrophied ventricle in pre-systole. Atrial or fourth heart sounds accompany the presystolic distention and are useful signs of hypertrophy such as in aortic stenosis or systemic hypertension on the left side and pulmonic stenosis or pulmonary hypertension on the right. In the pulmonary hypertension of emphysema, the atrial sound is often heard in the epigastrium, since all of the heart sounds, including a loud pulmonary closure sound, are damped because of the large anteroposterior chest dimensions.

***Failure.*** Third heart sounds are physiologic in children and young adults but pathologic in older subjects. Ventricular failure is a common cause of abnormal third heart sounds and should be specifically sought with light touch of the stethoscopic bell in all patients in whom heart failure is suspected. It is a point of interest that the effect of cardiac infarction on the left ventricular myocardium commonly results in the need for an increased distending force that is provided by augmented atrial contraction; atrial or fourth heart sounds are prevalent in this context.

Since an ischemic left ventricle may take longer than normal to eject, the aortic valve closure may fall after pulmonary closure and cause reversed or paradoxical splitting of the second heart sound. The commoner cause of paradoxical splitting, however, is left bundle-branch-block or a right ventricular pacemaker which is its electrical equivalent.

***Constriction.*** Myocardial constriction, as in constrictive pericarditis, results in high atrial pressures and rapid flow into nondistensible ventricles. Under these circumstances, loud early third heart sounds occur and have been called "early diastolic sounds" of constrictive pericarditis. Similar sounds occur in the restrictive form of primary myocardial disease.

## Conclusion

Modern instrumentation has not eclipsed the need for sophisticated auscultation. On the contrary, clinical research has gone far in clarifying the meaning of auscultatory events in acquired and congenital heart disease and has increased the value of the stethoscope as a clinical tool.

# Spontaneous Peritonitis in an Adult*

## Report of a Case

MICHAEL BRANCACCIO, M.D. AND
J. CHANDLER SMITH, M.D.

SPONTANEOUS PERITONITIS in an adult is rare. When it occurs it is almost always associated with cirrhosis and ascites. The cause often remains obscure because an extraperitoneal source of infection is frequently not found. While the peritonitis may respond to treatment, fewer than 10% of the patients survive this illness. Cirrhosis with ascites is therefore a surgical risk; it should contraindicate elective operations and should be thought of as a clinical diagnosis when peritonitis arises spontaneously. The following case report illustrates this entity.

### Report of Case

The patient was a black male 54 years old who was admitted to the hospital because of abdominal pain and distension. He had been well until 8 months before when urgency, dysuria, and nocturia developed. These were attributed to prostatic hyperplasia, and relief was attained by urethral dilation. The symptoms recurred, and 1 month before admission a transurethral prostatectomy was performed. Recovery was uneventful except for a left epididymitis, and the patient was discharged after 11 days in the hospital. As soon as he returned home, pain in the abdomen and abdominal distension were noted. These were gradually progressive. The pain was diffuse, constant, and occasionally crampy. Constipation developed and persisted for 2 weeks. Over the past 6 months there had been a weight loss of 20 pounds. The patient denied vomiting, hematemesis, and tarry stools. He also denied smoking and drinking of alcoholic beverages. He was re-admitted 22 days after returning home.

Physical examination revealed a well-developed middle-aged man in moderate distress because of abdominal pain. The temperature was 36.7° C., the pulse rate 120, the respiratory rate 42, and the blood pressure 118/76 mm Hg. The head, neck, and chest were not remarkable. The abdomen was distended and tympanitic. Rebound tenderness was elicited. Bowel sounds were hypoactive. No organs or masses were palpated. The left testis was indurated, the ischiorectal regions were tender, and external hemorrhoids were present. Tenderness was also elicited at the base of the scrotum. The remainder of the physical examination was not remarkable.

Urinalysis revealed 2 plus albumin and leukocytes too numerous to count. The hemoglobin was 10 Gm, the hematocrit 30.4, and the leukocytes numbered 16,600 with 46 segmented granulocytes and 38 band cells per 100 cells counted. The blood urea nitrogen was 27 mg, the serum bilirubin was 2.3 mg, and the total serum protein was 8.5 Gm with 1.8 Gm albumin and 6.7 Gm globulin. An X-ray film of the abdomen revealed dilated loops of ileum, and the colon showed multiple fluid levels. Blood cultures were sterile.

The patient was thought to have an intestinal obstruction, and a laparotomy was performed. The ileum was diffusely inflamed, fibrin was present on the serosa, and 2 liters of dark yellow ascitic fluid were removed. Cultures of the ascitic fluid revealed Klebsiella. No intestinal obstruction was found. The abdomen was then closed, the patient was placed in lithotomy position, and abscesses of the perineum and pararectal regions were drained. Cultures of these also revealed Klebsiella.

Postoperatively the abdominal distension persisted, and the patient remained febrile. The lactic dehydrogenase, glutamic acid, and alkaline phosphatase rose to high levels. In addition, the serum bilirubin rose to 8 mg per 100 ml, and the leukocyte count rose to 23,500 per cmm. The patient became irreversibly hypotensive and died on the 10th hospital day.

Autopsy examination revealed acute fibrinous peritonitis with approximately 1600 ml of dark red nonviscid fluid in the abdomen. The liver weighed 1300 Gm and disclosed advanced Laennec's cirrhosis (Fig. 1). Varices were not found in the esophagus. A pocket of purulent exudate was present in the posterior cul de sac. The kidneys showed acute pyelitis. The prostatic urethra revealed a defect at the site of the recent operation. The cut surfaces of the prostate were marked by small, scattered, pale-yellow abscesses (Fig. 2). Abscesses were also present at the base of the penis, within the right seminal vesicle and in the soft tissue adjacent to the rectum. None of these communicated with the peritoneum. Additional disclosures included edema of both lungs, a recent tracheostomy, and an acute laryngotracheitis. The brain was externally normal. On cross section an abscess measuring 1 cm in diameter was found in the white matter of the left occipital lobe. Cultures of the abscess were sterile; cultures of the peritoneum disclosed Klebsiella organisms.

---

*From the George Washington University School of Medicine, Washington, D.C.

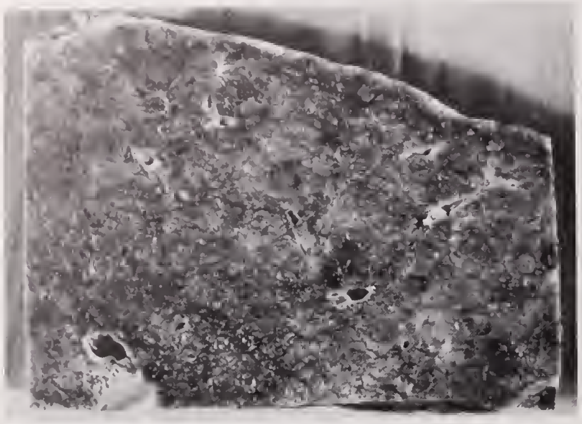


FIG. 1. Cut surface of the liver with Laennec cirrhosis.

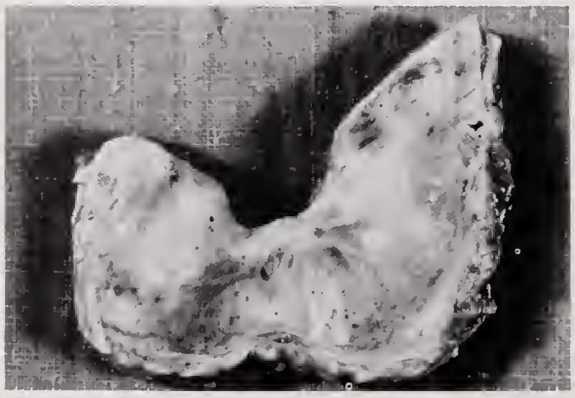


FIG. 2. Cut surface of the prostate showing abscesses.

## Discussion

Neither the cirrhosis nor the ascites was detected before the transurethral prostatectomy. There was accordingly no contraindication to the procedure even though this operation is occasionally attended by a transient bacteremia,[1,2] and a bacteremia may cause peritonitis in such patients. Subsequently the possibility of detecting the cirrhosis and ascites was impaired by the development of abdominal distension. At the time of the laparotomy ascites and peritonitis were found but no intestinal obstruction was seen. The cause of the peritonitis was therefore not clear. The principal findings of the autopsy examination were advanced cirrhosis of Laennec type, acute fibrinous peritonitis, and an intact peritoneum. There was no physical connection between the peritoneal sac and the perineal and pararectal abscesses. The findings were characteristic of the syndrome of spontaneous peritonitis, i.e., the abrupt onset of acute peritonitis in patients with cirrhosis and ascites.

Several authors have called attention to the frequent development of a spontaneous coliform bacteremia in patients with cirrhosis.[3-5] More recently the development of acute peritonitis in patients with cirrhosis and ascites has been emphasized.[6-9] The bacteremia has been attributed to the shunting of portal blood away from the hepatic sinusoids in cirrhotic livers so that bacteria are not removed from the circulation.[10,6] The peritonitis has been attributed to the proliferation of those bacteria in the ascitic fluid.[6,7]

The most comprehensive report of spontaneous peritonitis is provided by Conn and Fessel.[9] They reviewed 28 cases from their own files and 42 cases from the literature. From these data the features of the syndrome were assembled. The condition occurs most often in middle-aged adults and is more common in men than in women. The clinical features are fever, abdominal pain, and tenderness of the abdomen of sudden onset associated with hypoactive bowel sounds, hypotension, and signs of impending hepatic coma. Jaundice, granulocytic leukocytosis, hypoalbuminemia, and elevation of the alkaline phosphatase and serum glutamic transaminase are usual. Ascites is the pivotal feature of the syndrome, and the ascitic fluid has the characteristics of an infected transudate. Cultures revealed an enteric organism in about 2/3 of the cases, usually *E. coli*, and a nonenteric organism in the remainder, usually pneumococci or streptococci. There was a notable absence of staphylococci, and in about 1/10 of cases, multiple organisms were found. Examination of the peritoneal fluid regularly revealed large numbers of polymorphonuclear leukocytes which indicate the exudative nature of the inflammatory process.

Cirrhosis is regularly present; it is usually of Laennec type but may be postnecrotic, especially in children and young adults. In 1 case the cirrhosis was pigmentary, i.e., hemosiderosis. The cirrhotic process tends to be advanced, and in about half of the patients portal-systemic encephalopathy was clinically evident.

Spontaneous peritonitis must be distinguished from tuberculous peritonitis and acute pancreatitis with ascites. In the latter the blood and ascitic fluid are sterile, and the serum amylase is often elevated, whereas in the former, radiographic evidence of pulmonary disease is usually present, leukocytosis is less common, and monocytes predominate in the ascitic fluid. The condition must also be distinguished from primary peritonitis without cirrhosis which occurs almost exclusively in girls under the age of 10 and in patients with nephrosis who have ascites. In the latter instance hypogammaglobulinemia is characteristic, and in both instances the infecting organism is almost always a pneumococcus.

In some patients a source of the infection is found in the respiratory, biliary, or urinary tracts. In most, however, no site is identified. Regardless of the source it is presumed that the organisms reach the peritoneum by hematogenous dissemination because bacteremia is common, portal shunting impairs the removal of bacteria from the blood, and no other explanation provides easily for the appearance of a unique organism in the peritoneum that has previously been identified in an extra-peritoneal focus of infection.

Therapy includes the use of antibiotics selected according to the organism identified in the peritoneal fluid, and adrenocortical steroids for sepsis due to Gram-negative organisms when that develops. Although the peritonitis responds in about half of the cases, fewer than 10% of patients survived the hospital admission for this illness. The advanced state of the cirrhotic process was presumed to contribute significantly to this unfavorable outcome.[9]

The present case differs from the characteristic syndrome in 4 particulars. The first is that signs of hepatic coma were not observed, although they were noted in about 80% of the cases reviewed by Conn and Fessel.[9] The second is that a bacteremia was not established by blood cultures although it was present in more than half of the cases reviewed. This, of course, does not mean that a transient bacteremia did not occur. In fact, the finding of the brain abscess nearly certifies this expectation. Moreover, the appearance of abdominal symptoms within 2 weeks after the prostatectomy suggests that the bacteremia may have taken place during the operation or shortly thereafter. The third difference is that abscesses of the perineum and pararectal soft tissues provide a source for the peritonitis, and this interpretation is re-inforced by the cultures of Klebsiella from both sites. In the 1 case of peritonitis due to Klebsiella, as reported by Conn and Fessel, there was also a postoperative urinary-tract infection that was presumed to be the source of the peritoneal inflammation. None of these differences disqualifies the case from the syndrome. Finally, death was attributed to shock associated with the acute diffuse peritonitis, whereas in many cases the peritoneal inflammation responds to treatment and liver failure is presumed to contribute to the outcome.

## Summary

Spontaneous peritonitis arises in patients with cirrhosis and ascites. The infecting agent is usually an enteric organism, the source of the infection is usually not found, and the mechanism of the infection is attributed to a bacteremia. Pathogenesis is given in part to the cirrhotic process which causes ascites on the one hand, and impairs the hepatic removal of bacteria from the blood on the other. The mortality is high. The condition constitutes a surgical risk and should be a cause for deferment of elective operations.

## References

1. PLORDE, J. J., KENNEDY, R. P., BOURNE, H. H., ANSELL, J. S., AND PETERSDORF, R. G.: Course and prognosis of prostatectomy. New Eng. J. Med., 1965, 272, 269.
2. MARSHALL, A.: Bacteraemia following retropubic prostatectomy. Brit. J. Urol., 1961, 33, 25.
3. WHIPPLE, R. L., Jr., AND HARRIS, J. F. B: E. coli septicemia in Laennec's cirrhosis of the liver. Ann. Intern. Med., 1950, 33, 462.
4. MARTIN, W. J., SPITTEL, J. A., MORLOCK, C. G., AND BAGGENSTOSS, A. H.: Severe liver disease complicated by bacteremia due to Gram-negative bacilli. Arch. Intern. Med., 1956, 98, 8.
5. TISDALE, W. A.: Spontaneous colon bacillus bacteremia in Laennec's cirrhosis. Gastroenterology, 1961, 40, 141.
6. KERR, D. N. S., PEARSON, D. T., and READ, A. E.: Infection of ascitic fluid in patients with hepatic cirrhosis. Gut, 1963, 4, 394.
7. CONN, H. O.: Spontaneous peritonitis and bacteremia in Laennec's cirrhosis caused by enteric organisms: Relatively common but rarely recognized syndrome. Ann. Intern. Med., 1964, 60, 568.
8. EPSTEIN, M., CALIA, F. M., and GABUZDA, G. J.: Pneumococcal peritonitis in patients with postnecrotic cirrhosis. New Eng. J. Med., 1968, 278, 69.
9. CONN. H. O., and FESSEL, J. M.: Spontaneous bacterial peritonitis in cirrhosis: Variations on a theme. Medicine, 1971, 50, 161.
10. MACINDOE, A. H.: Vascular lesions of portal cirrhosis. Arch. Path., 1928, 5, 23.

# Postictal Pulmonary Edema*

## Report of a Case

ANTONINA N. AMIGABLE, M.D.† AND
HABIB O. FARHOUDI, M.D.‡

POSTICTAL PULMONARY EDEMA known as Pipe syndrome is apparently a rare complication of grand mal seizure which has received very little attention in the literature. Shanahan[1] in 1908 was the first to report this condition in 11 epileptic patients, 4 of whom died. Autopsies performed in 2 showed pulmonary edema. Two years later Ohlmacher[2] reported 5 patients in whom grand mal seizures were followed by pulmonary edema and death.

### Report of Case

A.B., a 53-year-old black man, was admitted to D.C. General Hospital for the first time on March 26, 1970 following a grand mal seizure. He had had epilepsy since childhood which was poorly controlled despite conventional treatment with Dilantin and Phenobarbital. One week prior to admission he developed frequent seizures of shortness of breath and productive cough with whitish phlegm followed by fever, chills, bloody sputum and chest pain. He became worse prior to hospitalization.

Ten to fifteen years prior to admission he had a thoracotomy for "lung infection" of the right side. There was no history of cardiovascular disease, diabetes, tuberculosis, or allergy. He had consumed a moderate amount of alcohol for many years.

Physical examination on admission revealed a well-developed, well-nourished man who appeared to be in acute respiratory distress. He was alert and well oriented. The blood pressure was 130/70, the heart rate 130 per minute, and the temperature 104°F. The skin was warm and moist. There was no lymphadenopathy. Examination of the lungs revealed bilaterai diffuse crepitant rales in both anterior and posterior lung fields. Chest X-ray revealed evidence of previous thoracotomy and massive symmetrical alveolar infiltrates in the upper two-thirds of the lung fields (Fig. 1). ECG showed sinus tachycardia.

Gram-stain of the sputum showed few positive cocci and few negative rods. Four Ziehl-Neelsen stain were negative for AFB. The hematocrit was 45%, and the white blood cells numbered 18,000 with 87% neutrophils, 8% lymphocytes, and 5% monocytes. Urinalysis was negative. Prothrombin time was 14.8 sec with control of 11.9 sec. SGOT, LDH, alkaline phosphatase, total protein, A/G ratio, bilirubin, cholesterol, serum creatinine, Ca, P, electrolytes, blood sugar, BUN, and uric acid were within normal limits.

On admission, because of the presenting symptoms and laboratory data, an impression of pneumonia, perhaps of mixed type, was made. Sputum culture and sensitivity were requested. The patient was placed on Cephalothin 1 Gm every 4 hours I.V. and Kanamycin 0.5 Gm every 12 hours I.M. Dilantin and Phenobarbital were continued.

The sputum culture revealed normal flora. PPD (Intermediate strength) was 20 mm, and on this basis INH was started. Three days after admission the patient became afebrile, and chest X-ray films (Fig. 2) showed clearing of the infiltrates except of the linear fibrosis in the right upper lobe secondary to the old thoracotomy and lung surgery. He was discharged on the 11th hospital day in good condition and was maintained on Dilantin, Phenobarbital, and INH.

The patients was re-admitted on June 5, 1970 with similar complaints—hemoptysis, dyspnea, fever, and convulsion just prior to admission. The temperature was 101.6°F, the blood pressure 130/90, and the heart rate 100/min. Bilateral diffuse crepitant rales were audible in both anterior and posterior lung fields. Chest X-ray films at this time (Fig. 3) revealed symmetrical alveolar infiltrates in both lung fields, which were thought to represent pulmonary edema. This cleared completely in 5 days (Fig. 4). AFB culture of the sputum which was obtained in the previous admission was positive, PAS was added to the treatment regimen. The patient was improved and signed out against medical advice on the 11th hospital day.

### Discussion

Since the original article of Shanahan in 1908 there have been very few published reports about postictal pulmonary edema, a very important and

---

* From the Department of Medicine, Howard University, District of Columbia General Hospital, 19th and C Streets, S.E., Washington, D.C.

† Hematology Department, Veterans Administration Hospital, 50 Irving Street, N.W., Washington, D.C. 20010.

‡ Assistant Professor of Medicine, Howard University, D.C. General Hospital, Washington, D.C.

Request for reprints should be addressed to Dr. Habib O. Farhoudi, D.C. General Hospital, Washington, D.C. 20003.

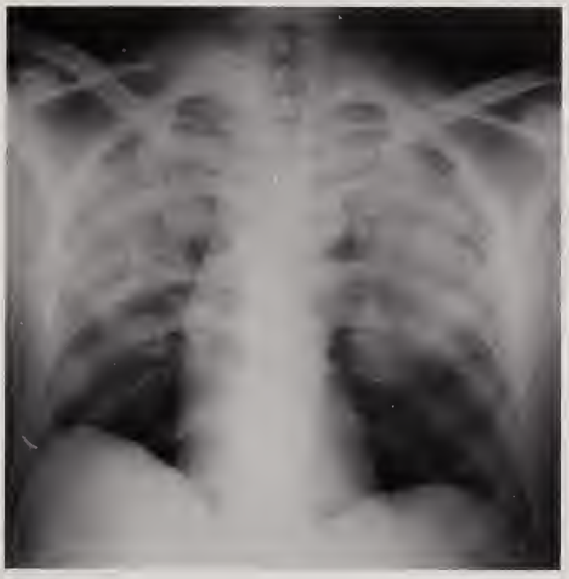


**FIG. 1. Massive symmetrical alveolar infiltrates in upper two-thirds of lung fields.**

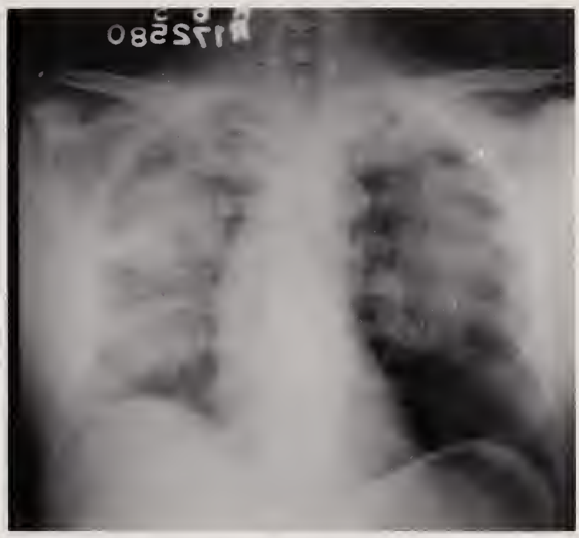


**FIG. 3. Chest x-ray on second hospital admission showing evidence of pulmonary edema.**

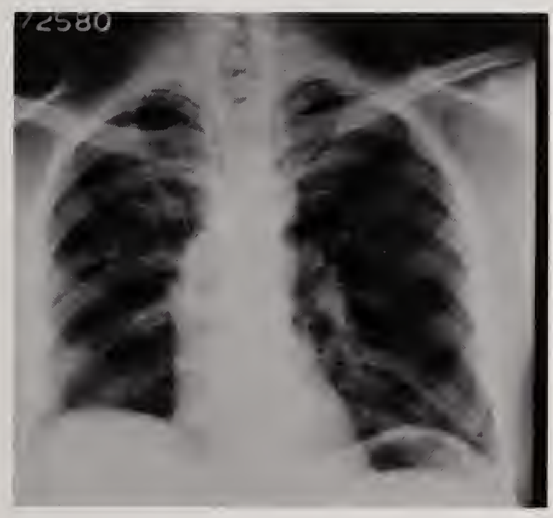


**FIG. 2. Marked clearance of pulmonary infiltrates after surgery.**

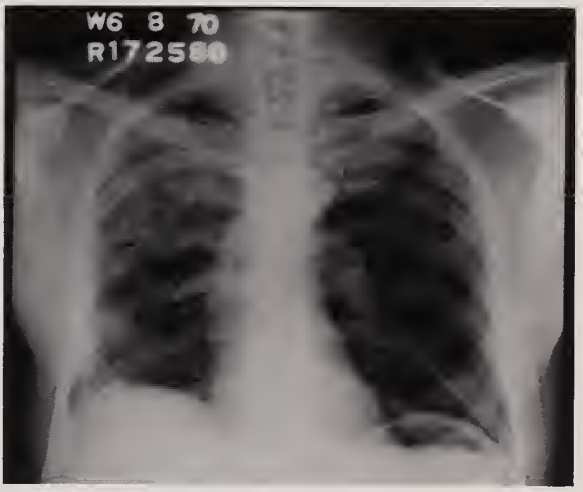


**FIG. 4. Clearance of pulmonary infiltrates after 4 days.**

indeed a serious complication of grand mal seizures. Langeron[3] in 1925 reported 1 patient with postictal pulmonary edema, Keser[4] 1 patient in 1942, and Horst[5] 2 patients in 1952. Horst was the first to offer roentgenologic evidence of pulmonary edema of the patients he reported. His patients survived and had no physical and electrocardiographic evidence on intrinsic heart disease. More recently Bonbrest[6] reported a patient in 1964, Huff and Fred[7] 2 patients in 1965, and Bloom[8] 1 patient in 1967. The patient reported by Bonbrest was a 15-year-old retarded boy with grand mal seizure of 3 years' duration, who was admitted to the hospital because of abnormal chest X-ray films, which were taken 3 days prior to admission. Twelve hours before this he had a grand mal seizure, followed by dyspnea, cough, and blood-streaked sputum. Hemoptysis persisted until the next day and then disappeared. On examination 3 days after the chest X-ray films were taken no abnormality of the heart and lungs were noted, and chest X-ray films on admission showed clearance of the infiltrates seen 3 days prior to admission. The patients of Bloom and Huff and Fred showed a quite similar pattern of postictal pulmonary edema.

The evidence for the presence of pulmonary edema in our patient included hemoptysis, tachycardia, crepitant diffuse bilateral rales, diffuse alveolar infiltrates on X-ray films which cleared rapidly in 4 or

5 days. Bronchopneumonia and aspiration pneumonia could be considered in our case, but they are unlikely because of the rapid clearance of pulmonary infiltrates and negative sputum cultures. We believe that the positive AFB sputum culture of our patient is unrelated to the Pipe syndrome. Whether underlying tuberculosis precipitated the recurrent postictal pulmonary edema is uncertain.

The pathogenesis of postictal pulmonary edema is poorly understood. However, it has been demonstrated in animals[9,10] that elevated intracranial pressure can lead to pulmonary edema. This may also occur in man and laboratory animals with brain injury or intracranial hemorrhage. It has been noted that patients with grand mal seizures have significantly increased intracranial pressure during convulsion,[10] which may be an important factor in the genesis of pulmonary edema.

Huff and Fred[8] emphasizes that in the management of postepileptic pulmonary edema that the edema may disappear spontaneously, that the use of oxygen with positive-pressure breathing may be all that is needed to bring the patient back to normal state, that morphine is contraindicated because of its tendency to elevate CSF pressure and depression of respiration, and that digitalis may not be beneficial because cardiac failure does not play a major role in the production of postictal pulmonary edema.

The interesting aspect of this syndrome is its occurrence in patients who have epilepsy for a long period of time and whose seizures had been inadequately controlled by medication. The apparent rarity of this condition might be due to lack of routine chest X-ray films following grand mal seizures. We would like to stress the point that the clinicians should be more aware of this condition and that routine chest X-ray films should be taken following seizures.

## References

1. SHANAHAN, W. T.: Acute pulmonary edema as a complication of epileptic seizure. New York J. Med., 1908, 87, 64.
2. OHLMACHER, A. P.: Acute pulmonary edema as a terminal event in certain forms of epilepsy. Amer. J. Med. Sci., 1910, 139, 417.
3. LANGERON, L.: L'oedeme aigu du poumon: Manifestation viscerale de l'epilepsie. Presse Med., 1925, 33, 65.
4. KESER, V.: L'oedeme pulmonaire aigu d'origine centrale. Rev. Med. Suisse Rom, 1942, 62, 38.
5. HORST, H. G.: Zur frage des neuralen lungenodem beim epileptiker. Artliche Wochenschrift, 1952, 7, 35.
6. BONBREST, H. C.: Pulmonary edema following an epileptic seizure. Amer. Rev. of Pul. Dis., 1965, 91, 97.
7. HUFF, R. W. AND FRED, H. L.: Postictal pulmonary edema. Arch. Intern. Med., 1966, 117, 824.
8. BLOOM, S.: Pulmonary edema following a grand mal seizure. Amer. Rev. of Resp. Dis., 1968, 97, 292.
9. WHITE, P. T., GRANT, P., MOSIER, J. AND CRAIG, A.: Changes in cerebral dynamics assessment with seizures. Neurology, 1961, 11, 354.
10. HARRISON, W. AND LIEBOW, A. A.: The effect of increased intracranial pressure on the pulmonary circulation in relation to pulmonary edema. Circulation, 1952, 5, 824.

# Congenital Cervical Herniation of the Lung

## Report of a Case

MANDELL D. STEARMAN, M.D.*, MASSOUD MAJD, M.D.†, AND
JOSEPH M. LOPRESTI, M.D.‡

CERVICAL HERNIATION of the lung is rare in infants. Munnell[1] reported a total of 267 cases in all age-groups. Since that time 9 cases have been added to the medical literature. Of this total, only 2 occurred in infants. Cunningham and Peters[2] described right-sided cervical herniation of the lung in a 4-1/2 month old patient with Cri du Chat syndrome. Palazzo and Garrett[3] reported bilateral cervical hernias in a 7-week-old child with associated congenital anomalies of cleft lip and palate, nasal deformity, separated maxillae, small mandible, and deformities of the ears. Our patient represents the third case of cervical herniation of the lungs to be described during infancy.

### Report of Case

A white female infant was first seen at the Children's Hospital of the District of Columbia at the age of 9 months because of poor growth and development. She was born after 37 weeks' gestation. Pregnancy and delivery were uncomplicated. The birth weight was 5 lbs. 11 ozs. The post-natal period was complicated by a "collapsed lung" which was treated successfully.

The infant was normal until the second post-natal month. Since that time growth and development have been retarded, with no head control, 'reaching', or locomotion. Two months prior to admission she was noted to have bulging in the lateral neck when crying. This was occasionally accompanied by mild cyanosis.

Physical examination showed an alert and active child with poor muscle tone. All body measurements were below the third percentile. Hypertelorism was present. When the child cried, bulges were noted on both sides of the base of the neck. This was occasionally accompanied by mild to moderate cyanosis. Auscultation over the bulges disclosed breath sounds. There was syndactyly of the second and third toes, and over-riding of the 4th toe on the 5th toe bilaterally. There was bilateral calcaneus valgus. The remainder of the physical examination was normal.

All laboratory studies were normal. Chromosomal studies on 2 occasions were normal.

Roentgenograms of the chest showed bilateral cervical herniation of the lungs when the patient cried (Fig. 1). During quiet breathing no herniation was discernible (Fig. 2). Other radiograms showed a Mongoloid pelvis and absence of the sacrum (Fig. 3). The iliac index was 51.5.

### Discussion

Although some authors[4-6] have stated that cervical hernias of the lungs are congenital, only 2 cases have been reported in the first year of life.

The mechanism of cervical herniation is a defect or weakness in Sibon's fascia, the fibrous layer that protects the dome of the lung. "Such a congenital or acquired deficiency would allow for the pleura and lung to herniate into the space between the sternocleidomastoid and scalenus anticus muscles".[7] The herniation is worsened by increased intrathoracic pressure over a varying period of time. An increase in intrathoracic pressure may result from chronic cough, asthma, or straining. The majority of reported cases of cervical herniation of the lung occurred in children and young adults with these symptoms.[8-10] Once established, any Valsalva maneuver will increase the herniation.

Our patient is similar to the 2 cases reported in infants.[2,3] The hernia was not an isolated finding. The other major features in this case were retarded mental and physical growth and development, hypertelorism, and skeletal abnormalities. There were no chromosomal abnormalities. Of interest is the presence of a Mongoloid pelvis in the absence of Down's syndrome. However, a low iliac index has been reported in association with sacral agenesis, which this child demonstrated.[11]

---

* Senior Resident, George Washington University Hospital, 901 23rd Street, N.W., Washington, D.C. 20037.

† Associate Radiologist, Children's Hospital of the District of Columbia, 2125 13th Street, N.W., Washington, D.C. 20009; Assistant Professor of Radiology, George Washington University School of Medicine, Washington, D.C.

‡ Chairman, Department of Radiology, Children's Hospital of the District of Columbia.

## Summary

A patient with bilateral cervical herniation of the lung and associated anomalies has been described. The associated anomalies included mental and physical retardation, hypertelorism, syndactyly, calcaneus valgus, Mongoloid pelvis and sacral agenesis. This represents the third case of cervical herniation of the lung to be reported in an infant.

## Acknowledgment

We acknowledge with thanks Miss D. Houseknecht for her assistance in the preparation of this manuscript.

## References

1. MUNNELL, E. R.: Ann. Thorac. Surg., 1968, 5, 205.
2. CUNNINGHAM, M. D. AND PETERS, E. R.: Amer. J. Dis. Child., 1969, 118, 769.
3. PALAZZO, W. L. AND GARRETT, T. A.: Radiology, 1951, 56, 575.
4. LEIBOWITZ, D. A. AND BECK, A. R.: J. Mount Sinai Hosp., N.Y., 1967, 34, 507.
5. MAURER, E. AND BLADES, B.: J. Thorac. Surg., 1946, 15, 77.
6. HISCOE, D. B. AND DIGNAN, G.: J. Thorac. Surg., 1955, 30, 335.
7. BALLINGER, W. F., II: In Surgery of the Chest, John H. Gibbon Ed., Philadelphia, Pa.: W. B. Saunders Co., 1962, p. 206.
8. SIEGELMAN, S., SHENSER, J., AND ATTAI, L.: Dis. Chest, 1968, 53, 578.
9. GIOVANNIELLO, J., ET AL.: New York J. Med., 1969, 69, 694.
10. BRONSTHER, B., ET AL.: J. Pediat. Surg., 1968, 3, 544.
11. TAYBI, H. AND KANE, P.: Radiol. Clin. N. Amer., 1968, 6, 215.

# Spinal Subdural Hematoma and Hematomyelia Simulating A Spinal Cord Tumor*

## Report of a Case

ARTHUR I. KOBRINE, M.D.†, NILO M. LOPES, M.D.‡
AND IVAN CIRIC, M.D.§

SPINAL CORD TUMORS in and around the conus medullaris are not rare, the most common types being ependymomas and neurofibromas. We have had occasion to examine and treat a 20-year old woman with hematomyelia and a subdural hematoma at $L_1$-$L_2$, whose clinical and myelographic pictures were indistinguishable from an intradural tumor.

### Report of Case

L. C., a 20-year old woman began having intermittent low back pain, right hip and right leg pain in 1966, which was increased by coughing and sneezing, but did not occur frequently enough for her to seek medical attention. In February 1969 her pain increased in frequency to such an extent that she sought medical aid and was hospitalized in another hospital, where a myelogram was done. She was told that the study was normal, and was treated with bed rest and pelvic traction. While in the hospital her pain improved somewhat, but upon discharge from the hospital a severe constant pain developed in her low back, right hip, and right leg. From March 1969 to December 1969 she had chiropractic maneuvers, which neither increased nor decreased her pain. In December 1969 she was hospitalized at the Evanston Hospital, at which time she complained of constant pain in the back, both hips, and right leg, made worse by coughing or sneezing. Her physical activity for the preceding 6 months had been severely limited by pain. She had been confined to bed most of the time. There was no history of bowel or bladder dysfunction, weakness of the legs, or subjective sensory changes.

Physical examination at that time revealed a positive straight leg-raising test bilaterally at 35° and a decreased patellar jerk on the right. Strength was within normal limits in all of the muscle groups of both legs. Sensory examination was entirely within normal limits.

Plain X-ray films of the entire spine were interpreted as normal. On December 22, 1969 a pantopaque myelogram was performed on another service. The subarachnoid space was visualized up to the lower border of $L_2$, and the study was interpreted as showing a rootsleeve defect at $L_4$-$L_5$ on the right. No other abnormalities were seen. Because of a marked elevation of the CSF protein of 500 mg% the neurosurgery service was consulted. It was decided that the myelogram should be repeated to rule out the presence of a lesion at a level higher. Two subsequent attempts to repeat the myelogram were abandoned after blood-tinged CSF was recovered from the subarachnoid space. The patient was discharged and re-admitted to the neurosurgery service on January 11, 1970. The back pain, right hip and leg pain had increased.

The straight leg-raising test was again markedly postive bilaterally at 35°, and the right patellar reflex remained decreased. There were no muscle weakness, atrophy, fasciculations, or objective sensory changes.

On January 14, 1970 another pantopaque myelogram was performed. The CSF was amber and had a protein content of 500 mg%. The subarachnoid space was visualized to the level of $T_8$. A complete block was present at $L_1$-$L_2$, and an intradural intramedullary mass lesion was outlined at this level. (fig. 1).

The patient was taken to the operating room and a complete laminectomy of $T_{12}$, $L_1$ and $L_2$ and part of $L_3$ was performed under general endotracheal anesthesia. Upon opening the dura mater, an organizing gray brown subdural hematoma was found completely surrounding the spinal cord at $L_1$-$L_2$. This tissue was completely removed. The spinal cord itself did not end until the lower border of $L_2$. Approximately 1 cm caudal to the area of compression by the subdural hematoma the conus medullaris appeared more swollen than usual. A #22 needle on a syringe was passed into the conus at this level and 5 cc of sanguineous fluid was easily aspirated. The swelling immediately collapsed.

---

* From the Departments of Surgery, Division of Neurosurgery, Evanston Hospital, Evanston, Illinois, and Northwestern University Medical School, Chicago, Illinois.

† Department of Neurosurgery, Walter Reed General Hospital, Washington, D.C.

‡ Northwestern University Medical School, Chicago, Illinois.

§ Northwestern University Medical School, Chicago, Illinois.

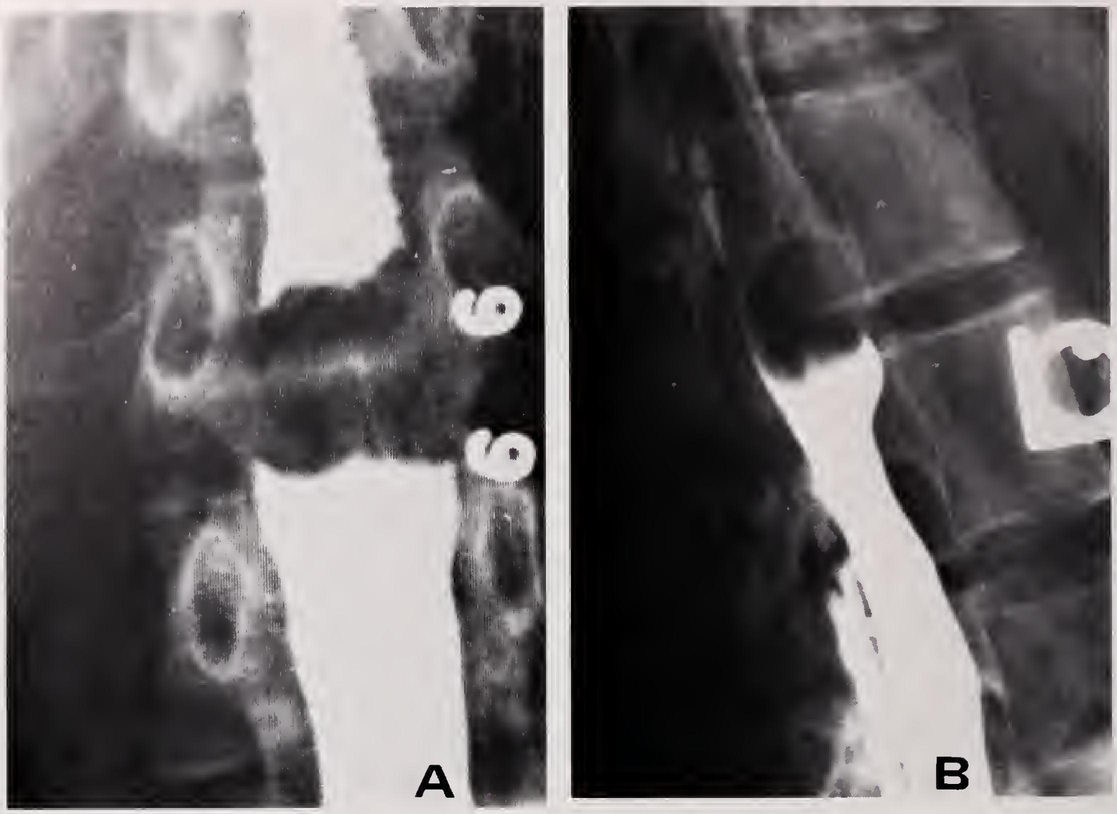


**FIG. 1. A. Anteroposterior and B. lateral view of pantopaque myelogram demonstrating a circumscribed intradural lesion at $L_1$-$L_2$.**

Because of the possibility of an intramedullary spinal cord tumor being present the spinal cord was opened in the midline posteriorly through a 1 cm long incision. At the depth of 3-4 mm grayish-reddish and markedly soft-appearing tissue was encountered and a biopsy done. The wound was then closed, with the dura mater open.

The histologic appearance of the tissue was that of a myelomalacic process. There was no evidence of neoplasm. The subdural tissue removed appeared to be an organizing hematoma. Both fibroblastic activity and capillary formation were present. The appearance was that of a 3- to 4-week-old hematoma.

Postoperatively the patient's pain disappeared immediately. Recovery was uneventful. Bowel and bladder function were normal. The strength in all muscle groups of both legs was normal. Sensory examination for pinprick, temperature, vibration, proprioception, and light touch was entirely normal except for a slight anesthesia to pinprick over the outer aspect of the left foot. The ankle jerk on the left was absent, with bilaterally symmetrical, slightly increased patellar reflexes. In order to rule out the presence of a bleeding diathesis, a complete coagulation profile, including prothrombin time, partial thromboplastin time, clotting time, and platelet count, was done and found to be normal. One month after surgery she was still free of pain, and her neurological examination was unchanged.

## Discussion

Spontaneous hematomyelia is uncommon but not rare.[1] It most often occurs with angiomas of the spinal cord,[2-4] but has been known to occur when no lesion could be found.[1] Subdural hematomas compressing the spinal cord are quite rare, however. Three cases in the English literature have been reported.[4-6] These occurred in patients with bleeding tendencies, such as hemophilia,[4] in patients who had been subjected to low-back trauma,[5-6] or who had been anticoagulated.[7] None of them had both hematomyelia and a subdural hematoma.

The histological examination of the removed subdural hematoma in our case would make it appear to be at least 4 weeks old. The patient denied any antecedent trauma, and the coagulation profile ruled out any bleeding diathesis. Did the chiropractic maneuvers that the patient underwent for 7 months contribute to, or cause the lesion? Was there a "cryptic" arteriovenous malformation or a small vascular neoplasm present which we were unable to identify? Finally, in view of the low termination of patient's spinal cord at the $L_3$ level, a misdirected lumbar puncture at the $L_2$-$_3$ level may have caused trauma to the conus medullaris resulting in hematomyelia and subdural hematoma formation.

## Summary

Subdural hematomas compressing the spinal cord are rare. Three cases have been reported in the English literature. These cases have occurred either in patients with bleeding problems such as hemophilia, or as a direct result of trauma. Hematomyelia is more common. It is usually secondary to hemmorrhage from an arteriovenous malformation or angioma within the substance of the spinal cord, but has been reported in cases in which no lesion could be found. We have treated a 20-year-old woman whose clinical and myelographic picture were undistinguishable from a spinal-cord tumor. At the time of surgery both a subdural hematoma at $L_1$-$L_2$ and hematomyelia of the conus medularis were found. No specific cause could be found.

## References

1. GATENBY, P.B.B.: Spontaneous Hematomyella. Irish J. Med. Sci., 1951, 377.
2. ODOM, G.L., WOODHALL, B., and MARGOLIS, G.: Spontaneous Hematomyella and Angiomas of the Spinal Cord. J. Neurosurg., 1957, 14, 192.
3. RICHARDSON, J.D.: Spontaneous Haematomyelia. Brain, 1938, 61, 17.
4. SCHILLER, F., NELIGAN, G., and BUDTZ-OLSEN, O.: Surgery in Hemophilia: A Case of Spinal Subdural Hematoma Producing Paraplegia. Lancet, 1948, 2, 842.
5. RADER, J.P.: Chronic Subdural Hematoma of the Spinal Cord. New Eng. J. Med., 1955, 253, 374.
6. STEWART, D.H., and WATKINS, E.S.: Spinal Cord Compression by Chronic Subdural Hematoma. J. Neurosurg., 1969, 31, 80.
7. CIRIC, I., personal communication.

# President's Page

## WE'VE JUST BEGUN

1971 has been an active year for the Medical Society of the District of Columbia. Circumstances beyond our control have forced us into areas of interest and activity that were unnecessary in past years. Previously, an individual who graduated medical school was allowed to "do his own thing." That may still be true in some parts of the country, but certainly not in the urban areas. Government pressures, third party carrier influence, consumer demands and increasing malpractice insurance rates have had a serious impact upon the practice of medicine.

Important changes are ahead for all of medicine. National health insurance, increased regional medical programs, health maintenance organizations and an increased doctor-assistant program, are but a few of the ways in which our practice methods may be influenced.

Certainly our own plans for a Peer Foundation will represent a step forward in the total review process. This will bring review where it should be, in the hands of medical personnel as opposed to lay people rendering judgments on medical problems. The Peer Foundation concept will be broad enough to include a generalized review of both quantity of practice as well as quality. Large segments of our society will be asked to participate in this review process on a rotating basis, and we will be justly compensated for our efforts. The gauntlet has already been hurled. Either we do this job for ourselves or the Government will do it for us. This is not a futuristic scheme. Foundations are in operation in many medical communities in the country today.

During the coming year we anticipate a closer relationship with the City Government in all phases of health activities, not only as providers but in basic planning as well.

We are looking for a closer liaison with our surrounding state societies, as well as the county jurisdictions, so that we may work for common goals in unison and thus have greater opportunities to achieve results.

We would like to see one standard of care in this community for all its citizens with adequate funding of medical support programs.

These are just a few examples of activities in which we are deeply involved. We've just begun. Let us all get behind Dr. Darrell Crain and offer our support.

Marvin C Korengold

# Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help—for these four very good reasons:

**Appeal** With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Many patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

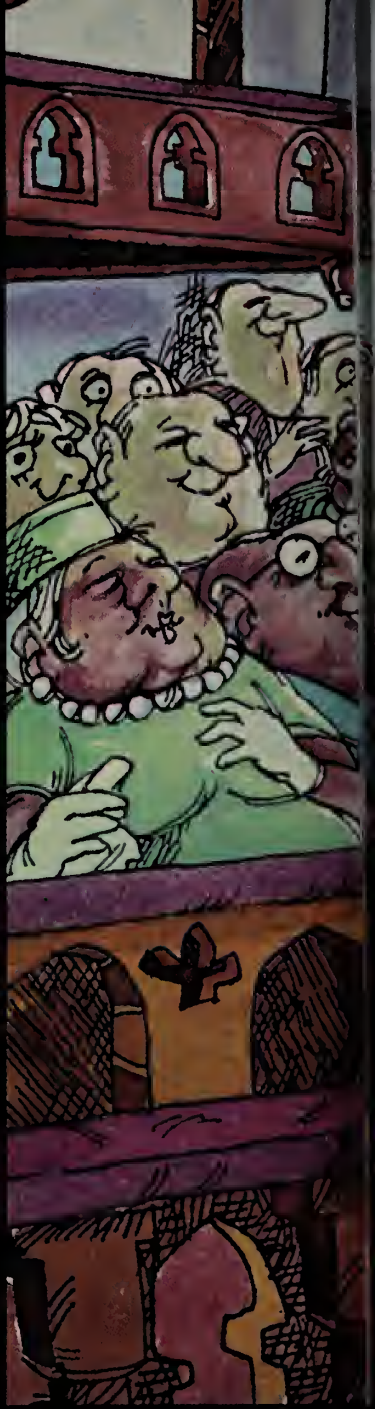
**Nourishment** Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

**Convenience** Within 4 minutes a bowl of delicious soup is heated and ready to eat.

**Economy** Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

Campbell's
CONDENSED
SOUP



# When diarrhea wrings the wedding belle...

It's all very well to counsel patience in diarrhea patients. There are times when relief of symptoms can't come too soon.

X-ray studies[1] in 16 normal subjects showed just how promptly the active ingredient in Lomotil does its work.

Lomotil retarded gastrointestinal motility particularly during the first three hours after administration. It continued its moderating action on the bowel for at least three hours more.

Physicians prescribe Lomotil more often than any other drug when the urgency for the control of diarrhea is most distressing.

*1. Demeulenaere, L.: Action du R 1132 sur le transit gastro-intestinal, Acta gastroent. Belg. 21:674-680 (Sept.-Oct.) 1958.*

**Lomotil®**

**TABLETS/LIQUID**

Each tablet and each 5 cc. of liquid contain:
Diphenoxylate hydrochloride . . . 2.5 mg.
(Warning: may be habit-forming)
Atropine sulfate . . . . . . . . . . . . 0.025 mg.

**Saves the Day**

*Warnings:* Lomotil should be used with caution in patients taking barbiturates and, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

*Precautions:* Lomotil is classified as a Schedule V substance by Federal Law with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages

should not be exceeded, and medication should be kept out of reach of children. Signs of accidental overdosage may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

*Adverse Reactions:* Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise.

*Overdosage:* The medication should be kept out of reach of children since accidental overdosage may cause severe, even fatal, respiratory depression.

*Dosage:* The recommended average initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

**Children:**
3-6 mo.... ½ tsp.* t.i.d. (3 mg.)
6-12 mo... ½ tsp. q.i.d. (4 mg.)
1-2 yr..... ½ tsp. 5 times daily (5 mg.)
2-5 yr.....1 tsp. t.i.d. (6 mg.)
5-8 yr.....1 tsp. q.i.d. (8 mg.)
8-12 yr....1 tsp. 5 times daily (10 mg.)
**Adults:**....2 tsp. 5 times daily (20 mg.)
or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful.

Use of Lomotil is not recommended in infants less than 3 months of age.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

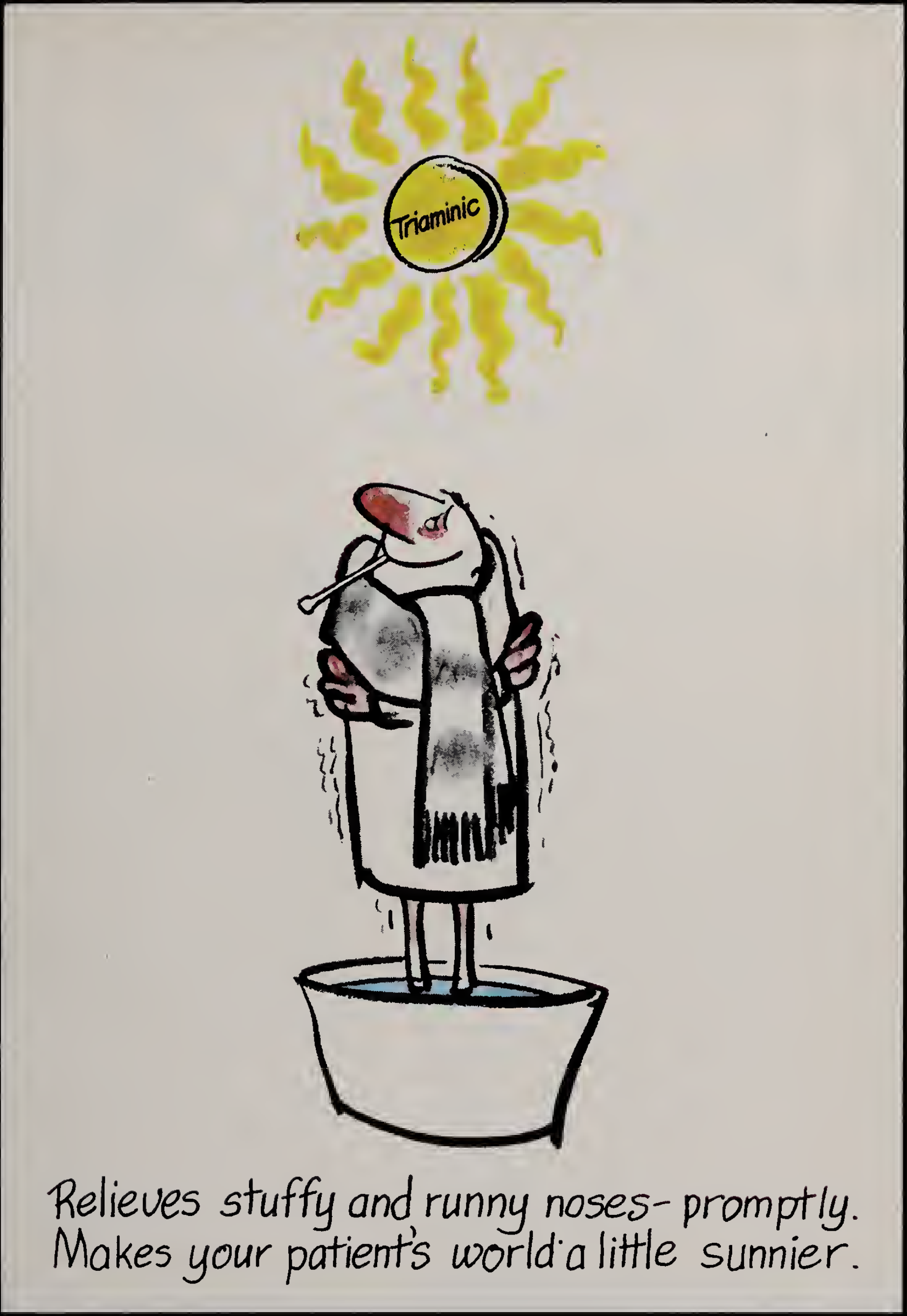
SEARLE Manufactured by SEARLE & CO.
San Juan, Puerto Rico 00936

For more detailed medical information write.
G. D. Searle & Co., Medical Department,
P.O. Box 5110, Chicago, Illinois 60680
*Research in the Service of Medicine*

DARVON®
COMPOUND-65
65 mg. propoxyphene hydrochloride, 227 mg.
aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine
Lilly H06
Lilly H06
Lilly H06
Lilly H06
Lilly

Additional information available to the profession on request.
**Eli Lilly and Company • Indianapolis, Indiana 46206**

101488


Triaminic
Relieves stuffy and runny noses- promptly.
Makes your patient's world a little sunnier.

**Triaminic®**

phenylpropanolamine hydrochloride, pyrilamine maleate, pheniramine maleate

**"the Sunshine Tablet"**

**Formula:** Each timed release tablet contains phenylpropanolamine hydrochloride, 50 mg pyrilamine maleate, 25 mg, pheniramine maleate 25 mg **Indications.** Relief from such symptoms as nasal congestion profuse nasal discharge and postnasal drip associated with colds nasal allergies sinusitis and rhinitis. **Precautions:** Patients should not drive a car or operate dangerous machinery if drowsiness occurs Use with caution in the presence of hypertension, hyperthyroidism, cardiovascular disease or diabetes **Side Effects:** Occasional drowsiness, blurred vision, cardiac palpitations flushing, dizziness, nervousness or gastrointestinal upsets **Dosage** Adults--one tablet swallowed whole in morning, midafternoon and before retiring **Availability:** In bottles of 100 250

Rx
ONLY

**Dorsey Laboratories, Lincoln, Nebraska, 68501**

# in cardiac edema

# Dyazide®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

# gets the water out

# spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR.*

**Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

**Contraindications:** Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

**Warnings:** **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

**Precautions:** Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

**Supplied:** Bottles of 100 capsules.

SK&F

SK&F Co., Carolina, P.R. 00630
a subsidiary of Smith Kline & French Laboratories

# MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA

## VOLUME XL

## INDEX

### Pagination

| *Pages* | *No.* | *Month* | *Pages* | *No.* | *Month* |
|---|---|---|---|---|---|
| 1–84 | 1 | January | 419–488 | 7 | July |
| 85–156 | 2 | February | 489–566 | 8 | August |
| 157–222 | 3 | March | 567–632 | 9 | September |
| 223–296 | 4 | April | 633–686 | 10 | October |
| 297–360 | 5 | May | 687–738 | 11 | November |
| 361–418 | 6 | June | 739–789 | 12 | December |

### Scientific Articles

Achlorhydria in Alcoholics (Janis), 654
The Alternative Abortion (Branch, Herr, Lieverman), 691
Apparent Inappropriate Anti-Diuretic Hormone Secretion in Cirrhosis of the Liver (Danovitch, Shora, Berkman), 16
Cancer of the Prostate Simulating Cancer of the Rectum: The Digital Dilemma. Report of 3 Cases (Stein, Herbst), 162
Carbon Monoxide in Health and Politics (Silver), 169
A Case of Pre-eclampsia with Bell's Palsy and Concomitant Fetal Anomalies (Gerber, Collins), 317
Clinical Significance of Circulating Proinsulin (Gutman, Recant), 589
The Clinical Significance of the Atrial T-Wave (Calatayud, Silver), 178
Cold . . . Man's Assiduous Remedy (Henderson), 583
Congenital Cervical Herniation of the Lung. Report of a Case (Stearman, Majd, LoPresti), 759
Congenital Heart Disease in Children (Blumenthal, Jesse), 749
Congenital Heart Disease in First Year of Life (Blumenthal, Jesse), 713
Current Evaluation of Anticholinergic Drugs (Rosenstein, Rosenstein, Belton, Dacosta), 300
Delayed Growth and Pubescence Associated with Primary Hepatoma (Seymour), 110
Diagnostic Usefulness of Rectal Biopsy (Dobbins), 223
Disseminated Herpes Zoster: Treatment with Cytosine Arabinoside (Neilan, Schechter), 573
Dyspnea, Fever, and Anasarca in a 39-Year-Old Woman-CPC (Smith), 106
Emergency Treatment of Drug Abusers (Phillipson), 436
Escherichia Coli Meningitis (Scheidemandel, Campbell, Curtin), 85
The Effects of Chewable Isosorbide Dinitrate in Coronary Insufficiency: A Report on Exercise Electrocardiograms in Thirteen Patients (Gorman, Evans), 235
Electrical Reversion of Atrial Fibrillation-Selection of Patients in 1971 (Lindsay), 231
Establishment and Function of a Clinical Cancer Program in a Private Hospital (Jonas), 172
Familial Systemic Lupus Erythematosus (Salazar, Robbins, Scalettar), 227
Fractures of the Floor and Medial Wall of the Orbit (Cohn), 9
Free Thyroxine Indices (Godwin, Cook, Bailey), 697
From Traditional Institutional Management to the Therapeutic Community Concept: One Hospital's Approach to Change (Amberg), 644
Gastrobronchial Fistula: Report of a Case and Review of the Literature (Gondos, Hakkal, Walker), 649
General Highlights of Cardiac Auscultation (Perloff), 369
Genetic Counseling (Brady), 430
Glenn Dale Hospital: A Rehabilitation Center (Madhu, Weiss), 655
Glomangioma (Glomus Tumor): Report of Case with 50-Year History (Johnson), 372
Gradual Progression of First Degree Atrioventricular Block to Complete Atrioventricular Block in Childhood (Vieweg, Proulx, Wolff), 702
Guidelines for Infant Feeding (Gokulanathan, Verghese), 309
Health Care for War Demonstrators in Washington, April-May, 1971. (Hayman, Berkeley), 633
Health Services Branch (Webb), 660
Heparin Therapy in Meningococcal Thrombocytopenic Coagulopathy (Pierce, Cutler, Curtin), 19
Hepatomegaly for 17 Years in a 65-Year-Old White Man-CPC (Smith), 380
Heredofamilial Tremor: A Case Study (Restak, O'Reilly), 243
Highlights of Auscultation in Acquired Heart Disease (Perloff), 504
Highlights of Auscultation in Congenital Heart Disease (Perloff), 751
Hymenoptera Allergy: When to Immunize (Brown, Bernton), 246
The Hypercatabolic Patient with Acute Renal Failure (Thompson, Cuha, Goldberger, Kramer, Parrish), 239
Increased Levels of Creatine Phosphokinase After Intramuscular Injections (Attar, Mata), 92
Jaundice and Abdominal Pain in a 65-Year-Old White Woman-CPC (Smith), 320
Layering of Contrast Material in Gallbladder (Filpi, Fu), 739
Leukemia or Leukemoid Reaction?-CPC (Smith), 706
Lopoproteins–Clinical Application (Dietrich), 157
Marihuana: A Study of Toxic Drug Reaction Among Adolescents (Berman), 742
Medical Genetics: An Esoteric Science or an Aid to Patient Care? (Headings, Murray), 496
Microscopic Laryngoscopy and Laryngeal Surgery (Balla, Elsberg), 165
Neuropacemaker for Relief of Intractable Pain (Fox), 577
Opportunities for Progress Against Cancer (Baker), 425
Osler's Textbook of Medicine (Moxness), 375
The Outlook for Prevention of Dental Caries (Scherp), 439
Peritoneoscopy: A Useful Diagnostic Technique (Trujillo), 297
Photosensitivity Caused by Oral Contraceptives (Elgart, Higdon), 501

Postictal Pulmonary Edema (Amigable, Farhoudi), 756
Postoperative Variations in the Electrophysiology of the Epicardial Onlay Pacemaker Lead (Smyth, Lekagul, Keshishian), 12
A Post-Stroke Success Story in the Rehabilitation of Hospitalized Elderly Patients (Hoff), 640
Present Trends in the Laboratory Diagnosis of N. Gonorrhoeae (Breen), 638
Progressive Systemic Sclerosis Simulating Idiopathic Pulmonary Fibrosis. Report of a Case (Charles), 313
A Psychiatric Foster Care Success Story (Ward), 745
Pulmonary Alveolar Proteinosis: Report of a Case (Nicklas), 710
Quantitation of the Atrioventricular Conduction Response Following Dixogin in Normal Subjects (Snyder, Davidson, Young), 175
Reaction to Tuberculin, Susceptibility to Diphtheria and Immunity Against Smallpox among Medical Students over a Decade (Whitted, Heshmat, Prater), 361
Recent Advances in Neurological Surgery (Fox), 88
Recent Developments in Peripheral Vascular Surgery-The Arterial Graft of Bovine Origin (Keshishian, Smyth, Adkins, Camp, Yahr), 687
Recent Observations on Transfusion Reactions (Miller, Schmidt), 419
Recent Therapeutic Developments in Lung Cancer (Hansen, Selawry), 580
Recognition of the Syndrome of Post-Traumatic Pulmonary-Insufficiency in a Patient with Severe Trauma. Report of a Case (Casey), 103
Rehabilitation of Indigent Arthritis Patients in the District of Columbia (Booth, Goldklang, Roth), 304
The Reliability of Chromium-51 Isotope Scanning in the Diagnosis and Management of Placenta Praevia (Bagley, Dodek), 1
Sex Education in the Public Schools: Is the Question Really Yea or Nay? (Silver), 506
The Significance and Importance of Associated Anorectal Diseases with Hemorrhoids (Weinstein), 4
Spinal Subdural Hematoma and Hematomyelia Simulating a Spinal Cord Tumor. Report of a Case (Kobrine, Lopes, Ciric), 761
Spontaneous Peritonitis in an Adult. Report of a Case (Brancaccio, Smith), 753
Teaching of Rudiments of Anatomic Pathology with Color Fiche (Smith), 248
Toxic Manifestations of Busulfan Therapy (Burns, McFarland, Matthews), 567
Transfusion in Washington 100 Years Ago (Schmidt), 424
The Use of Chemotherapy in Lung Cancer (Controlled Trials) (Shnider), 489
The Use of Isometric Tension (Hand Grip) in the Bedside Diagnosis of Idiopathic Hypertrophic Subaortic Stenosis (IHSS) (Rotsztain, Bowen), 367
Utilization of Side Effects through Molecular Manipulation (Wolff, Basabe, Grant, Grant, Lopez, Viktora), 98
Ventilatory Problems in Infants and Children (McClenathan, LoPresti), 94

## Scientific Authors

Adkins, Paul C., 687
Amberg, Rose G., 644
Amigable, Antonina N., 756
Attar, Ali M., 92
Bagley, Grant P., 1
Bailey, Jimmy, 697
Baker, Carl G., 425
Balla, Louis B., 165
Basabe, Juan, 98
Belton, Devaughn, 300
Berkeley, Mary J., 633
Berkman, Peter M., 16
Berman, Sidney, 742
Bernton, Harry S., 246
Blumenthal, Sidney, 713, 749
Booth, Geoffrey, 304
Bowen, Patrick J., 367
Brady, Roscoe O., 430
Brancaccio, Michael, 753
Branch, Benjamin N., 691
Breen, Rose M.S., 638
Brown, Halla, 246
Burns, Willard A., 567
Camp, Frank A., 687
Campbell, Cary W., 85
Casey, Maurice J., 103
Calatayud, Juan B., 178
Charles, M. Arthur, 313
Ciric, Ivan, 761
Cohn, Burton H., 9
Collins, Moniga, 317
Cook, C. Barrie, 697
Curtin, James A., 19, 85
Cutler, Leonard D., 19
Dacosta, Frances, 300
Danovitch, Stuart H., 16
Davidson, Lynne A., 175
Dietrich, Robert A., 157
Dobbins, William O., 223
Dodek, Samuel M., 1
Elgart, Mervyn L., 501
Elsberg, Paul, 165
Evans, John M., 235
Farhoudi, Habib O., 756
Filpi, Robert G., 739
Fox, John L., 88, 577
Fu, Whei-Rung, 739
Gerber, Aaron H., 317
Godwin, Ira D., 697
Gokulanathan, Karakart S., 309
Goldberger, Stephen, 239
Goldklang, Gerald, 304
Gondos, Bela, 649
Gorman, Patrick A., 235
Guha, Atin, 239
Gutman, Raul A., 589
Hakkal, Halappa G., 649
Hansen, Heine H., 580
Hayman, Charles R., 633
Headings, Verle E., 496
Henderson, Alfred R., 583
Herbst, William P., III, 162
Herr, Earl S., 691
Heshmat, Martin Y., 361
Higdon, Robert S., 501
Hoff, Amelia A., 640
Janis, Leo B., 000
Jesse, Mary Jane, 713, 749
Johnson Donald A., 372
Jonas, Karl C., 172
Keshishian, John M., 12, 687
Kobrine, Arthur I., 761
Kramer, Norman, 239
Krees, Stephen, 98
Lekagul, Sol, 12
Lieberman, E. James, 691

Lindsay, Joseph, Jr., 231
Lopes, Nilo M., 761
Lopez, Nestor, 98
LoPresti, Joseph M., 94, 759
McClenathan, James E., 94
McFarland, William, 567
Madhu, Tumkur, 654
Majd, Massoud, 759
Mata, Carlos, 92
Matthews, Mary J., 567
Miller, William V., 419
Moxness, Bennie A., 375
Murray, Robert F., 496
Neilan, Barbara A., 573
Nicklas, Richard, 710
O'Reilly, Sean, 243
Parrish, Alvin, 239
Perloff, Joseph K., 369, 504, 751
Phillipson, Richard, 436
Pierce, Lawrence E., 19
Prater, Lawrence, 361
Proulx, Commander Ronald A., 702
Recant, Lillian, 589
Restak, Richard, 243
Robbins, Douglas N., 227
Rosenstein, Gladys, 300
Rosenstein, Herman, 300
Roth, Henry, 304
Rotsztain, Alberto, 367
Salazar, Fernando A., 227
Scalettar, Raymond, 227
Schechter, Geraldine P., 573
Scheidemandel, Volker, 85
Scherp, Henry W., 439
Schmidt, Paul J., 419, 424
Selawry, Oleg S., 580
Seymour, John C., 110
Shnider, Bruce I., 489
Shora, Waseem, 16
Silver, Harold M., 169, 178
Silver, Larry B., 506
Smith, J. Chandler, 106, 248, 320, 380, 706, 753
Smyth, Nicholas P.D., 12, 687
Snyder, James R., 175
Stearman, Mandell D., 759
Stein, Clare A., 162
Thompson, Anne M., 239
Trujillo, Nelson P., 297
Verghese, Kannarkat P., 309
Vieweg, Lt. Commander Walter V. R., 702
Viktora, Josef, 98
Walker, William P., 649
Ward, Henry P., 745
Webb, Z. Ozella, 655
Weinstein, Jacob J., 4
Weiss, Moe, 654
Whitted, Harold H., 361
Wolff, Frederick W., 98
Wolff, Lt. Commander Gerald A., 702
Yahr, William Z., 687
Young, Janvier C., 175

## General

A

Adkins, Paul C., M.D., Chairman, Department of Surgery, George Washington University Medical Center, 67
American Association of Blood Banks: William G. Battaile, 25th President, 685
American Association of Medical Assistants, D.C. Chapter Officers, 415
American Cancer Society: S. Joseph Cosimano, M.D., re-elected President, D.C. Division, 685
American College of Cardiology: 1971 Distinguished Service Award given to William B. Walsh, M.D., 67; Samuel M. Fox, III, President-Elect, 286
American Gynecological Society: John Parks, M.D., President-Elect, 480
American Medical Association: Report of the Delegates to the A.M.A. (C. Willard Camalier, Jr., M.D. and John J. Hughes, M.D.), 616
American Physicians Art Association, 631
ANNALS: Raymond Scalettar, M.D., Associate Editor, 525; MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, Statement of Ownership, November issue
Ashley, Lucille P., R.N., director of continuing education, Metropolitan Washington Regional Medical Program, 484
*Awards:*
J.F.K. Memorial Lectureship Award, Julius B. Richmond, M.D., 65
1970 National Honors Citation for the Division's "Outreach Program", American Cancer Society, LaSalle D. Leffall, Jr., M.D. and S. Joseph Cosimano, M.D., 66
Stritch Medal, William B. Walsh, M.D., 67
1971 Distinguished Service Award, American College of Cardiology, William B. Walsh, M.D., 286
Man of the Year Award, Georgetown Clinical Society, Raymond A. Osbourn, M.D., 347
Passano Award for 1971, Stephen W. Kuffler, M.D., 415
St. George Medal and Citation, Cyril A. Schulman, M.D., 415
"Golden Apple," Georgetown University School of Medicine, W. Proctor Harvey, M.D., 480

B

Battaile, William G., M.D., 25th President, American Association of Blood Banks, 685
*Book Reviews:*
Atlas of Ear Surgery. William H. Saunders, M.D. and Michael M. Paperella, M.D. (Pumphrey), 736
Campbell's Operative Orthopaedics, 5th edition. A.H. Crenshaw, ed. (Schonholtz), 625
Cancer, Diagnosis, Treatment and Prognosis, 4th edition. Lauren V. Ackerman, M.D. and Juan A. Del Regato, M.D. (Shnider), 411
Chemistry for Medical Technologists, 3rd edition. Wilma L. White, Marilyn M. Erickson, and Sue C. Stevens, Ph.D. (Martens), 69
Clinical Approach to Endocrine Problems in Children. Matthew Steiner, M.D. (August), 294
Congenital and Pediatric Glaucomas. Robert N. Shaffer, M.D. and Daniel I. Weiss, M.D. (Egan), 154
Corneal Contact Lenses. Louis J. Girard, ed. (Lemp), 294
Current Dermatologic Management. Stuart Maddin, M.D., ed. (Ballinger), 155
The Early Orthopaedic Surgeons of America. Alfred Rives Shands, Jr., M.D. (Herzmark), 354
Essentials of Clinical Endocrinology. Norman G. Schneeberg, M.D. (Canary), 553
The Face in Genetic Disorders. Richard M. Goodman and Robert J. Gorlin (Smith), 553
The Hand. Lee Milford, M.D. (Ackerman), 686
Healthful School Environment. Charles C. Wilson, M.D. and Elizabeth A. Wilson (Berlin), 69
Hernia Repair Without Disability. Irving L. Lichtenstein, M.D. (Dillon), 410
Hormones and The Immune Response. G.E. Wolstenholme and Julie Knight, eds. (Shapiro), 625

The Human Heart, 2nd edition. Brenden Phibbs, M.D. (Bohrer), 735
Hypertrophic Obstructive Cardiomyopathy. G.E. Wolstenholme and Maeve O'Conner, eds. (Silverberg), 686
The Immunology of Malignant Disease. Jules E. Harris and Joseph G. Sinkovics (Hartman), 409
An Introduction to Neurosurgery, 2nd edition. Bryan Jennett, M.D. (Gargour), 354
Medical Parasitology. J. Walter Beck, Ph.D. and Elizabeth Barrett-Conner, M.D. (Wolfe), 735
Medical Pharmacology, Principles and Concepts, 5th edition. Andres Goth, M.D. (Himmelsbach), 409
Medical Specialty Terminology, Volume I-Pathology, Clinical Cytology and Clinical Pathology. Clara Gene Young and James D. Barger, M.D. (Jaffurs), 626
Oculoplastic Surgery: A Compendium of Principles and Techniques. Byron Smith, M.D. and Thomas Cherubini, M.D. (Kling), 294
Ophthalmic Optics and Refraction. Sir Stewart Duke-Elder and David Abrams (McAllister), 409
Ophthalmology: Principles and Concepts, 2nd edition. Frank W. Newell, M.D. (Kling), 69
Review of Physiological Chemistry, 13th edition. Harold A. Harper, Ph.D. (Campbell), 736
Selective Bibliography of Orthopaedic Surgery, 2nd edition. American Academy of Orthopaedic Surgeons. (Nirschl), 354
Spectroscopic Approaches to Biomolecular Conformation. D.W. Urry, ed. with contributors, 69
Speech Pathology: An Applied Behavioral Science. William H. Perkins, Ph.D. (Resnick), 554
Stereoscopic Atlas of Slit-Lamp Biomicroscopy. Alson E. Braley, M.D., Robert C. Watze, M.D., Lee Allen and Ogden Frazier (Glew), 627
Stereoscopic Manual of the Ocular Fundus in Local and Systemic Disease. Frederick Blodi, M.D., Lee Allen, and Ogden Frazier (Ehrlich), 555
Synopsis of Dermatology, 2nd edition. William D. Stewart, M.D., Julius L. Danto, M.D., Stuart Maddin, M.D. (Barksdale), 154
Synopsis of Pediatrics, 3rd edition. James G. Hughes (Howard), 626
Synopsis of Pharmacology, 2nd edition. V.C. Sutherland, Ph.D. (Wolff), 554
Urological Surgery, 4th edition. Austin Ingram Dodson, Jr., M.D. (Shuman), 155

C

Children's Hospital: Dr. Morris Feitel re-elected Chairman, Medical Staff, 147; George E. Hamilton, III, President of the Board of Directors, 147
Community Health Week, 629
Cosimano, Dr. S. Joseph, re-elected President, American Cancer Society, D.C. Division, 685

D

John Vinton Dahlgren Memorial Library, Georgetown University, 146
Department of Human Resources: Department of Human Resources, Special Issue Number, 633
D.C. General Hospital: William J. Washington, named administrator, 484
*D.C. Health Notes:*
Podiatry Screening Project of School Children in the District, 56
Potomic Pollution and the People, 142
Neighborhood Health Centers, 219
Supplemental Foods Program, 278
Reorganization of the Community Health Services Administration, 341
Results of Health Screening, 403
Lead Poisoning Screening, 474
Venereal Disease in the District of Columbia, 524
Health Services in the Community, 619
Language Development Program, 681
Pediatric Nurse Associate (Practitioner), 722
No Smoking Week, 779
*D.C. Mental Health Administration:*
Solving Old Problems in New Ways, 405
An Innovative Man for a Renovated Service, 465
Suicide Prevention in the Nation's Capitol, 526
Mobile Mental Health Units, 617
The Alcoholic Detoxification Center, 683
The Rehabilitation Center for Alcoholics, 723
The District's Outpatient Clinic for Alcoholics, 783
DOCPAC Briefs (District of Columbia Political Action Committee): 60, 143, 219, 282, 346, 412, 486, 566
"Doctor draft", first since 1969, 348
Doctor's Hospital: Doctor's Hospital, Special Issue Number, 157; Roy L. Sexton, M.D., honored for 50 years outstanding service, 485

E

*Editorials:*
Intensive Care Unit, 47
The Misuse of Cerebrospinal Fluid Shunts, 48
The Care of the Celebrity, 49
New Program for Infants Announced, 50
Higher Education and the Nation's Health, 213
Sequel to the Sesquicentennial, 277
More on Methadone, 337
The Stigma of Malpractice, 338
Evolution in the Library, 461
The Armed Forces Institute of Pathology Moves Forward, 463
Veteran Heroin Addicts in Washington: A Preliminary Report, 521
Rebel With a Cause, 615
Physician's Leadership in the Decade of the 70's, 671
A Key to Successful Preventive Medicine, 673
Demonstrations in the District of Columbia. A Message from the Emergency Medical Committee, 721

F

Feitel, Morris, M.D., re-elected Chairman, Medical Staff, Children's Hospital, 147
Fellowships in Infectious Diseases and Tropical Medicine, 286
Ferraraccio, Francisco P., 5th Executive Director, Medical Society of the District of Columbia, 264
Fox, Samuel M., III., M.D., appointed Professor of Medicine, George Washington University School of Medicine, 146; President-Elect, American College of Cardiology, 286
Franco-American Scientific Exchange, 286
Freedmen's Hospital: New play yard for convalescent children, 546

G

Georgetown University Medical Center: Robert C. Hunt, M.D. chosen Pediatrician of the Year, 413; Recipient of grant from the Joseph P. Kennedy, Jr. Foundation to set up the Joseph and Rose Kennedy Institute for the Study of Human Reproduction and Bioethics, 684; Affiliated with the National Biomedical Research Foundation, 685
George Washington University Medical Center: Paul C. Adkins, M.D. named Chairman, Department of Surgery, 67; William L. Joseph, M.D. chosen to direct surgical research laboratory, 146; George Washington University Medical Center, Special Issue Number, 223; Study on the Impact of Chromosomal Defects on the Development of the Human Eye, 632

H

Hamilton, George E., III, President, Board of Directors, Children's Hospital, 147
Harvey, W. Proctor, M.D., recipient of the "Golden Apple" award given by the students at Georgetown University School of Medicine, 480
Herman Goldman Memorial Child Diagnostic Laboratories, dedication, 631
*History of the Medical Society of the District of Columbia:* Chapter VII, "Doctors in Court", 41; Chapter VIII, "Pressures for Change", 119; Chapter IX, "Functions of a Modern Medical Society", 191; Chapter X, "The War Years", 267; Chapter XI, "More About the Home Front", 331; Chapter XII, "An Historic Decision", 393; Chapter XIII, "Woman's Auxiliary", 455; Chapter XIV, "Medical Society Building", 457; Chapter XV, "Officers and Honors", 511; Epilogue, 607
Howard University Center for Sickle Cell Anemia, 685
Humphreys, James W., Jr., M.D., named director of life sciences, Office of Manned Space Flight, 146
Hunt, Robert C., M.D., Pediatrician of the Year, Georgetown University Medical Center, Department of Pediatrics, 413
Hunter, Oscar B., Jr., M.D., named chairman of fund-raising group for Georgetown Medical School, 484

J

Johnson, John B., M.D., President, Washington Heart Association, 484
Joseph, William L., M.D., to direct surgical research laboratory at George Washington University Medical Center, 146

K

Joseph and Rose Kennedy Institute for the Study of Human Reproduction and Bioethics, established at Georgetown University Medical Center, 684
Kleh, Jack, M.D., named official delegate of the Plan for meetings of the National Association of Blue Shield Plans, 348; re-elected Chairman, Board of Medical Service of D.C., 484
Korengold, Marvin C., M.D., President of the Medical Society of the District of Columbia, biography, 28
Kuffler, Stephen W., M.D., recipient of the Passano Award for 1971, 415

L

Vincent T. Lombardi Cancer Research Center established, 65

M

Marriage and Family Institute, Walk-In Clinic opened, 484
Medical Service of D.C.: Jack Kleh, M.D. re-elected Chairman of the Board, 484
Medical Society of the District of Columbia: Officers and Personnel of Boards and Committees for 1971, 71; John Lewis Smith, III, chosen Legal Council, 281; Past Presidents Club Meeting, 480
Andrew W. Mellon Foundation, $300,000 given to Georgetown University, 146

*Membership:*

ACTIVE:

Abendschein, Walter Francis, 295
Ali, Nayab, 540
Amadeo, Bruno, 404
Armaly, Mansour F., 221
Azer, Rida, 778
Black, Edward, 629
Blackburn, Frank Charles, 295
Bowles, Lawrence T., 629
Branch, Benjamin, 629
Brown, Norcliffe E., 404
Bruner, Blackwell, 540
Bunales, Roy H., 221
Campbell, Carey, 629
Canilang, Eduardo, 629
Ceballos, Josefino M., 478
Chan, Cristina, 478
Chisholm, Reginald, 221
Chiu, Wu Shung, 738
Cohen, Harvey Martin, 404
Cowen, Norman Jay, 540
Demars, Jean-Pierre, 738
Deperio, Adolpho, 540
Derrick, Fletcher Carl, Jr., 221
Dillard, Martin G., 738
Duran, Leovino D., 738
Echardt, Marianne H., 629
Ein, Daniel, 629
Eng, Gloria, 630
Esfandiary, Ahmad, 295
Fan, Chin-Fu, 738
Fangonil, Alexander, 788
Farhoudi, Habibollah, 145
Feinstein, Robert, 738
Figueroa, Armando, 788
Flores, Eleanor, 630
Flynn, Meade W., 738
Fox, Samuel M., 478
Fram, David H., 221
Franco, Paulo E., 404
Frensilli, Frederick, 630
Gashi, Faton, 345
Giere, Joseph Walter, 61
Gomes, Mario, 478
Goodman, David H., 345
Goodwin, Merrill H., 61
Graves, Fay Burton, 221
Gupta, Krishan, 145
Gutierrez, Joseph E., 345
Haller, William L., 478
Havlik, Richard J., 345
Hendricks, Frederick B., 295
Henschke, Ulrich K., 404
Hubah, Clarence, 738
Hudson, William S., 295
Hentley, Robert Ross, 540
Ivey, Lewis, 630
Jandaghi, Mendi, 404
Javate, Bartolome A., 61
Joseph, David I., 738
Joseph, William, 478
Kachmarick, John A., 345
Kaplan, Kenneth, 788
Karpick, Ronald J., 630
Kelley, Marlene N., 478
Kennedy, Delmer, 345
Kessler, Gerald E., 404
Klingenmaier, Charles, 478
Kraybill, Ernest N., 221
Krinn, Malvin, 788
Laster, Horace C., 738
Lee, Chong-Doo, 738
Lee, Uriel, 478
Lessin, Lawrence S., 221
Lindsay, Joseph, 61
Lipsius, Steven, 630
Louison, Rupert, 788
Lurie, Melvyn L., 295
Majd, Massoud, 404
Manguikian, Detrad, 478
Massoud-Pour, Esmail, 478

McCullough, David Clifford, 540
McFarland, Maurice, 61
Mendjuk, Nicholas, 404
Mess, Charles, 630
Meyer, Jerry F., 630
Miranda Siragusa, Armando, 788
Mirsky, Harold S., 540
Mody, Vinod R., 788
Nachnanni, Gurbux, 404
Nelli, Franco M., 738
Nevaiser, Robert J., 738
O'Conner, Maureen, 295
Park, Woo Young, 540
Pasternack, Stefan A., 630
Perl, Stanley M., 61
Peterson, William F., 738
Platt, Marvin S., 738
Prieto, Daniel, 788
Rao, Kosaraju, 788
Ratino, John, 738
Renfield, Marilyn, 788
Reynolds, James, 738
Rios, Jorge, 478
Rivera, Rafael, 630
Roux, James V., 738
Ruben, Harvey Lee, 788
Schoettler, James A., 345
Scott, Victor F., 630
Sidhu, Kirpal S., 540
Singer, Herbert, 630
Sion, Rogelio G., 478
Smith, Robert B.W., 478
Strathmann, William, 295
Thompson, William F., 788
Titus-Dillon, Pauline, 630
Tseng, Shen Sho, 738
Vicencio, Fiorello S., 788
Villa-Real, Lucio S., 221
Viola, Michael V., 738
Warner, Oswald G., 788
Weber, Ronald B., 738
Weintraub, Herbert D., 788
White, Inez Jones, 630
Wilson, Fitzpatrick, 404
Wood, Don H., 788
Yang, Chau Hsiung, 738
Zeichner, Ben, 221

ASSOCIATE:

Anderson, Irwin S., 295
Ang, Kek Tiong, 404
Bobys, Robert J., 788
Buell, John R., 345
Cage, Carey W., 788
Cattell, Hereward S., 295
Chanchien, Tsunie, 404
Chisholm, Cecilin, 738
Christensen, John L., 738
DiLallo, Chester A., 540
Donohue, Joyce C., 61
Duffy, Leo T., 788
Duke, Clarence J., 630
Eidelman, Mildred, 630
Garcia, Mariano, 738
Hellman, Louis, 345
Hood, Thomas, 630
Husain, Zafar, 295
Immergut, Mark A., 404
Isaacson, Daniel, 788
Javedan, Mehrdad, 478
Kim, Taik Kyong, 540
Mannarino, Maria, 404
Meek, Donald C., 345
Miller, Laurence H., 630
O'Brien, John F., 738
Parrino, Paul S., 630
Principato, Jerold J., 61
Roxas, Primo, 295
Richman, Sanford N., 630
Satinsky, David, 478
Seymour, John C., 478
Shachat, David A., 345
Soriano, Arsenio, 478
Spekter, Louis, 540
Steinberg, Harvey, 404
Urban, George E., 788
Vinograd, Sherman P., 630
Wartofsky, Leonard, 788
Weiszer, Isaac, 345
Werner, Edward C., 630
Yacoubian, Jean, 346
Yim, Woong Soon, 61

RESIDENT-INTERN:

Aguhob, Eligio Batoy, 221
Autry, Joseph H., 478
Bertstein, Leroy, 404
Carr, Noel, 540
Collins, James, 788
Howard, H. James, 404
Kaufman, Louis, 788
Koch, Edward G., 346
McAveney, William, 540
Pearson, General Rudolph, 630
Robinson, James F. III, 61
Samms, Stanley R., 478
Steury, Steven, 788
Villamor, Nelson A., 404
Weitzel, William, 789

STUDENT:

Ammerman, Bruce J., 478
Bacon, Marylin, 540
Binder, Marc Karl, 478
Blum, Marc, 540
Blumberg, Andrew M., 478
Bransfield, Robert C., 630
Burka, Barrett L., 630
Butler, Kenneth, 540
Callahan, Michael, 630
Cerruti, Michael A., 630
Cibelli, Ludwig, 789
Cresswell, George F., 540
DeBaise, John R., 540
Delany, Richard, 789
Dill, Edward J., 478
Edwards, James J., 540
Falkowski, Walter S., 478
Foglia, Robert P., 478
Foley, William B., 478
Fox, Kenneth R., 478
Funt, Loren S., 478
Furlow, Terrence G., 478
Goldman, Robert L., 478
Gould, Jed D., 540
Greene, Michael, 630
Henrikson, Gary, 540
Hill, James Joseph, 478
Howard, Douglas, 478
Kagan, Harvey, 540
Kaires, Pamela, 540
Kass, Frederick III, 478
Katzen, Jay, 630
Kravitz, Paul, 540
Kutln, Kerry Lee, 540
Lewis, David G., 630
Loube, Julian, 478
Mazer, Steven F., 540

McCaffrey, Joseph, 540
McCormick, Paul, 789
Principi, Kathy L., 738
Miyawaki, Edison, 540
Monteverde, Ronald, 478
Noguchi, Philip, 540
Notz, Robert G., 540
O'Regan, Maureen, 478
Orlando, Michael M., 540
Parrish, Jerold, 630
Patrick, William, 540
Pillsbury, Harold C., 540
Prioleau, George, 738
Rabinowitz, Asher Don, 540
Reff, Richard, 540
Rosenthal, Jesse S., 478
Rudy, Richard K., 478
Sakowitz, Mervin, 478
Schiff, Gerald, 630
Schnipper, Edward, 478
Seltzer, Shalom, 540
Shifrin, Donald, 540
Starke, Peter, 478
Surrey, Mark W., 478
Susman, Eugene, 540
Sutton, John Edward, 540
Sweeney, Ralph, 630
Taub, Martin, 789
Taylor, Paul, 478
Thompson, Frank F., 540
Villarreal, Fernando, 630
Wassel, John J., 630
Weingand, John, 789
Wex, Timothy, 478
Whitby, Linda Jo, 540
Winston, David, 478
Young, David, 478

Metropolitan Washington Regional Medical Program, Lucille P. Ashley, R.N., appointed director for continuing education, 484

N

National Association of Blue Shield Plans: Jack Kleh, M.D. named official delegate, 348
National Biomedical Research Foundation, affiliated with by the Georgetown University Medical Center, 685
National Institutes of Health: National Institutes of Health, Special Issue Number, 419
National Society for Medical Research: John C. Rose, M.D. elected to the Board of Directors of the National Council, 347
Navy Medical Service Corps' 24th anniversary, 547
Nelson, Robert B., M.D., elected President of the Washington Hospital Center's Medical Board, 147
Number of physicians in the United States during 1970, 348

O

*OBITUARIES:*
Ayres, M. Frances, 68
Beard, William H., 628
Bruner, Weston, Jr., 737
Burns, Cornelius J., 417
Clark, Myles H., 418
Cooper, Charles David, 418
Costello, James R., 292
Douglas, Harry S., 359
Gay, Lendall C., 628
Hightower, Robert B., 418
Hoover, George, 487
Johnson, Stewart J., 565
Jones, Benjamin, Jr., 565
Kelso, Richard E., 359
Krause, Edward A., 487
Kreuzburg, Harvey F., 565
Kulesher, Henry T., 737
Kyle, Lawrence H., 417
Latman, Isidore, 628
Manion, William C., 156
Markwood, Emmett H., 565
McFall, Creed F., 292
Pelzman, Ivy A., 155
Shepherd, Elmer R., 292
Sherbourne, John C., 156
Smith, A. Leonard, 417
Tobin, William J., 359
Watt, Mary F., 68
Wood, Karl Hayden, D.D.S., 628
Office of Manned Space Flight, James W. Humphreys Jr., M.D., named director of life sciences, 146
Osbourn, Raymond A., M.D., Recipient of the Man of the Year Award of the Georgetown Clinical Society, 347

P

Parks, John, M.D., chosen President-Elect of the American Gynecological Society, 480
Past Presidents Club of the Medical Society of the District of Columbia, Meeting on April 22, 1971, 480
*President's Page,* (Korengold):
"Medicine for the Seventies", 27
"Medicine & Politics", 112
"Local Medical Legislation and Where We Stand", 184
"Let George Do It??", 258
"The Methadone Question. . .", 324
"Victims of Rape", 384
"May Day 1971", 444
"Come Ye Let Us Gather . . .", 519
"Incorporation in the District of Columbia", 598
"HMOs-What's it all About?", 669
"Medical Records Act", 719
Project HOPE program for Indian students, 546
Psychiatric Institute in Washington, D.C., Leon Yochelson, M.D., assumes duties of Chairman of the Board and President of the Medical Staff, 286

R

Rose, John C., M.D., elected to the Board of Directors of the National Council of the National Society for Medical Research, 347

S

Scalettar, Raymond, M.D., F.A.C.P., appointed Associate Editor of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 525
Schulman, Cyril A., M.D., recipient of the St. George Medal and Citation, 415
Scientific Assembly: for 1971, 541
Sexton, Roy L., M.D., honored for 50 years outstanding service to Doctors Hospital, 485
Smith, John Lewis, III, Legal Council to the Medical Society of the District of Columbia, 281

T

The Thoracic Society of the District of Columbia elects officers, 415

V

Veterans Administration Hospital: Veterans Administration Hospital, Special Issue Number, 567

W

Walsh, William B., M.D.: Recipient of 1970 Stritch Medal,

o, Recipient of the 1971 Distinguished Service award, American College of Cardiology, 286
Washington Dermatological Society, new officers, 631
Washington Heart Association: John B. Johnson, M.D., elected President, 484; Special Award of Merit to Washington Hospital Center, 546
Washington Hospital Center: Robert B. Nelson, M.D., elected President, Medical Board, 147; Recipient of Special Award of Merit from Washington Heart Association, 546
Washington, William J., M.D., named administrator of D.C. General Hospital, 484

Y

Yochelson, Leon, M.D., Chairman of the Board and President of the Medical Staff of the Psychiatric Institute in Washington, D.C., 286

# D.C. HEALTH NOTES

## No Smoking Week

READY . . SET . . QUIT!

That is the theme of the annual "No Smoking Week" program set for January 9-15 by the D.C. Interagency Council on Smoking and Health. It will be during the advent of the eighth anniversary of the Surgeon General's Advisory Committee Report on Smoking and Health.

Although the Council is working year-round on anti-smoking programs, the special week is designed to bolster the year-round efforts by putting emphasis on the common link of all anti-smoking efforts–making the decision to quit.

The special "No Smoking Week" program is designed to help those who have tried to quit and failed, to try again. Put a fresh spotlight on the reasons why people smoke, the important research that started the whole anti-smoking movement and got lost someplace in the action programs that followed.

The Council will focus public attention upon the continuing health problems of smoking and keep people thinking about quitting, in lieu of the constant reminders that the television commercials used to provide and currently exploited through the printed page.

One of the highlights of the 1972 "No Smoking Week" program will include a special Women's Day on Wednesday, January 12. One of the activities will be a brunch at the Congressional Club, which will include a skit spearheaded by the Rev. Gilbert Hartke of the School of Dramatics, Catholic University. Parts in the skit on the history of smoking women will be portrayed by prominent local women including some wives of Congressmen. A nationally-known celebrity will participate. Following the brunch a Seminar aimed at Smoking Nurses will be held.

The special day for women smokers was decided upon following statements made by Dr. Jesse L. Steinfeld, Surgeon General of the United States.

Dr. Steinfeld pointed out that "there is a substantial body of evidence which clearly supports the earlier view that maternal smoking during pregnancy harms the unborn child by exerting a retarding influence on fetal growth. In addition to the already-established data on low birth weight in the pregnancies of smoking mothers, there is new data on fetal waste and neonatal death."

The influence of smoking upon pregnancy brings up the whole problem of women and smoking. One-third of all women in the child-bearing years are smokers and their numbers are building up as more and more teen-age girls start the smoking habit.

In the past seven years there has been an appreciable drop in smoking among men and particularly among physicians, but regrettably there has been no comparable drop among women, including nurses.

Health officials–physicians, nurses, and allied personnel–should be well aware that our adult women smokers need factual information, encouragement and assistance in their efforts to quit the habit.

The proportion of women smokers in every age group except the 18-24 group is higher today than it was in 1955. Women basically find it harder to give up smoking than men and even those who do quit are more likely to return to smoking than men. Studies show that the woman smoker has a higher death rate than the non-smoking woman.

Recently, Dr. Steinfeld noted that "the health profession must become more active in the smoking and health field. Obstetricians and gynecologists, for instance, should have a particular concern about smoking's effects on their patients and general practitioners and pediatricians should help to reach both adult women and their young daughters."

Three year-round points of emphasis by the Interagency Council on Smoking and Health are (1) Getting women to stop smoking; (2) Stopping smoking in certain public places; (3) Stopping sales of cigarettes and no smoking in public and private hospitals and clinics.

In the District of Columbia, eight private and one public hospital prohibit the sale of cigarettes in their buildings. Efforts are being made to prohibit the sale of cigarettes in the other six private and four public hospitals.

During the special week, January 9-15, information booths will be located downtown and around shopping centers to distribute printed materials on how to quit the habit. The booths will be manned by teenagers, student nurses, and members of PTA groups. Also, "No Smoking" clinics will be conducted in various private and government agencies. Newspapers, radio and television are cooperating in publicizing the special week.

Persons desiring to quit smoking and who want answers on various aspects of Smoking and Health problems, may call 462-7000.

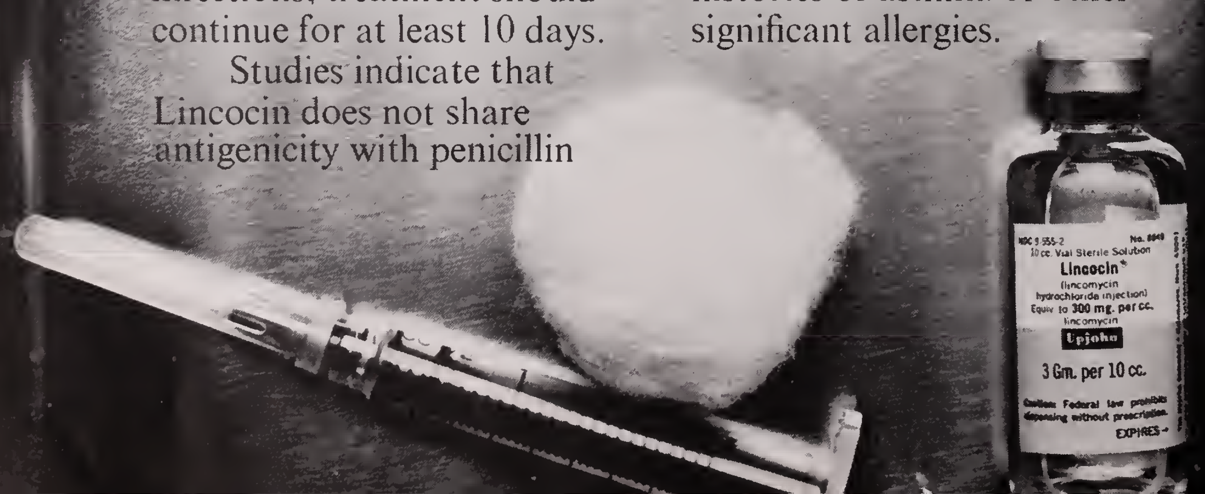
RAYMOND L. STANDARD, M.D., M.P.H.
*Director of Public Health*
*Associate Director, Department of Human Resources*

# Hypersensitivity to penicillin is a good reason to consider Lincocin®

## (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With ß-hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.


NDC 9-555-2
No.
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES

# So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

● Sterile Solution (300 mg. per ml.) ●

**Lincocin®**

(lincomycin hydrochloride, Upjohn)

NDC 9-555-2
No. [illegible]
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits
dispensing without prescription.
EXPIRES

© 1971 The Upjohn Company

● Sterile Solution (300 mg. per ml.) ●

# Lincocin®

# (lincomycin hydrochloride, Upjohn) for respiratory tract, skin, soft-tissue, and bone infections due to susceptible streptococci, pneumococci, and staphylococci

| Each preparation contains: | Lincomycin hydrochloride monohydrate equivalent to lincomycin base |
|---|---|
| 250 mg. Pediatric Capsule | 250 mg. |
| 500 mg. Capsule | 500 mg. |
| *Sterile Solution per 1 ml. | 300 mg. |
| Syrup per 5 ml. | 250 mg. |

*Contains also: Benzyl Alcohol 9 mg.; and, Water for Injection–q.s.

An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. *Local reactions*—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: *250 mg. and 500 mg.* Capsules—bottles of 24 and 100.

*Sterile Solution, 300 mg. per ml.*—2 and 10 ml. vials and 2 ml. syringe.

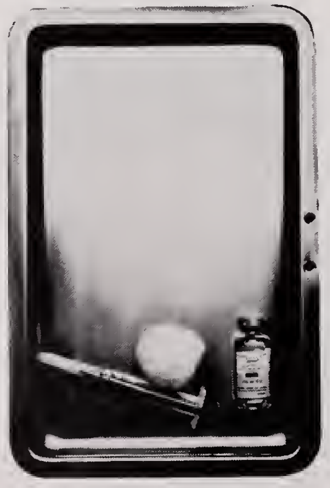
*Syrup, 250 mg. per 5 ml.*—60 ml. and pint bottles.

*For additional product information, consult the package insert or see your Upjohn representative.*

JA71-1203 MED B-5-SR (KZL-6)

The Upjohn Company
Kalamazoo
Michigan 49001

**Upjohn**



# ►D.C. MENTAL HEALTH ADMINISTRATION

## THE DISTRICT'S OUTPATIENT CLINIC FOR ALCOHOLICS

Washington, D.C. was a pioneer in governmental programs for alcoholics.

### The Early Days:

Dr. Leopold Wexberg, the psychiatrist in charge of the District's Mental Hygiene Clinic in the 1940's took a special interest in the problem of alcoholism. In 1945 he started a weekly evening clinic for alcoholics, the first of its kind in this country. His efforts, supplemented by those of leaders in the community and in Congress, culminated in 1947 in the Congressional Act which established a full-time outpatient treatment facility for alcoholics in D.C. This was intended to be a clinic where judges could send alcoholics in lieu of fines or jail, and where others could apply voluntarily for help. Congress voted funds for this facility to come from 6 per cent of D.C. license fee to sell liquor.

The full-time Alcoholic Rehabilitation Clinic opened at 23rd and M Sts. N.W. in February 1950. Dr. Wexberg headed up the Clinic with a staff of 17 but he continued half time as director of the Mental Hygiene Clinic. Together with a few of the other budding state alcoholism programs of that time he founded what is now the North American Association of Alcoholism Programs. He was both innovative and a scholar, writing many articles on alcoholism and related psychiatric problems in the medical and psychiatric journals. He firmly set the philosophy of the program as a psychiatric one accepting alcoholic patients as genuinely ill and using a multi-faceted approach. Alcoholism, he felt, was a very complex physical, social and psychological problem and he maintained that a combination of medical, psychological and social approaches should be used in the Clinic. He hired an inter-disciplinary staff of psychiatrists, psychologists, social workers, nurses and occupational therapists. Under his aegis the Clinic tried Antabuse, $CO_2$ and other drug therapy, psychodrama, art therapy, recreational and social therapy, a self-help organization of patients, psychoanalytic therapy, eclectic psychological approaches, supportive types of interviews and group therapy.

In all cases he emphasized the need to understand the underlying dynamics of the individual alcoholic, to fit treatment to the individual needs, and to review regularly the effectiveness of therapy. This philosophy continued long after he left the Clinic and is still basic to today's operation of the Outpatient Center.

### Years of Growth

As the activities of both the Alcoholic Rehabilitation Clinic and of the Mental Hygiene Clinic expanded, Dr. Wexberg saw the need for full-time directors in each. He continued to head the Mental Hygiene Clinic and in 1954 named as his successor in the Alcoholism program one of the other clinic psychiatrists, Dr. Anthony Zappala. Dr. Zappala was succeeded in 1958 by Dr. Jean Menetrez. In 1961 Dr. Sanford Billet assumed the leadership of the Clinic until in 1967 the current director, Dr. Dorothee Mindlin, who is a Clinical Psychologist, was appointed. Each of the succeeding psychiatrist directors have maintained a lasting interest in the field of alcoholism and in the Clinic and have acted as consultants to the Clinic.

Administratively the Clinic was first in the Bureau of Chronic Disease later in the Bureau of Mental Health and currently it is a satellite of the Area B Community Mental Health Center (under the Mental Health Administration of the D.C. Department of Human Resources).

The years also saw changes in location. After opening in 1950 at 23rd and M Sts., N.W., the Clinic moved to 14th and Q Sts., N.W. in 1959 and in 1969 to 1808 Adams Mill Rd., N.W. Concurrent with this last move the Clinic's name was changed to Adams Mill Alcoholism Center of Area B.

While the basic philosophy was carried forward with little change, major program alterations did occur: A reduction of staff, due to dwindling funds, led to reduction and eventual abolishing of recreational and occupational activities in 1958. These types of services were not reintroduced until 1969, when a Day Treatment program was added to the existing Clinic functions by means of grant money for the Area B Community Mental Health Center. Group psychotherapy, a minor activity in the early 1950's, grew to become the most important treatment modality. Currently the Adams Mill Alcoholism Center offers 24 different weekly treatment groups in its regular outpatient program and 12 activity groups in the Day Treatment section. The opening of the Day Treatment Unit added a new dimension of partial hospitalization and socialization for those alcoholics who are too ill to be employed or whose working hours leave them at loose ends in an unhealthy environment during the day. Another important addition to the outpatient services was the development of half-way houses for patients unable to maintain sobriety on their own in the community but who do not need institutional treatment.

The Area B grant allowed substantial expansion of staff for a Day Treatment program and for a much more active program of community outreach including home visits, job counseling, liaison with other alcoholism and mental health facilities, educational seminars and consultation for other community agencies, training of graduate students, aides, etc.

Research activities by some of the students and by staff have continued over the years.

The current staff includes 5 part-time psychiatrists, 1 part-time internist, 3 clinical psychologists, 7 social workers, 6 mental health nurses, 2 mental health specialists in alcoholism, 1 manual arts therapist, 2 alcoholism counselors, 5 mental health aides, 1 administrative aide, and 3 secretaries.

## Typical Experiences of a Patient

What happens to the typical applicant at the Adams Mill Alcoholism Center? Approximately one-third of the patients are self-referred. The rest are sent by agencies, physicians, ministers, employers, the courts, the motor vehicles department, Alcoholics Anonymous, etc. Almost invariably it is a crisis situation which brings the person to the outpatient center. Some of these crises require emergency medical or financial assistance, but basically the staff regards these crises as therapeutically constructive factors which lead the patient to recognize the seriousness of his alcohol problem. A firm ultimatum by the family or employer, the first experience of delirium tremens, seizures or a major blackout may spur the alcoholic into action.

The staff tries to convey to the person that he is suffering from a chronic condition and that his treatment of alcoholism needs to continue over a long period of time. Many alcoholics mistake recovery from the acute alcoholic withdrawal symptoms for a "cure." The staff at all stages of treatment is aware that they are dealing with a chronic progressive illness and that efforts must be toward long-range rehabilitation. Relapses are treated symptomatically but the greatest therapeutic progress is made in the periods of sobriety.

During the first weeks of treatment a patient fills out a personality questionnaire, developed specifically for alcoholics by the current clinical director, and attends 4 to 6 Orientation group sessions which include films on alcoholism and group discussion. An extensive biographical, medical, social and drinking history is obtained, as well as a physical examination report from the patient's private physician or the Clinic's internist. Psychiatric evaluations are made by the clinic's psychiatrists at all stages of treatment. Intelligence and projective personality testing can be added to the clinical picture. With a psychiatrist presiding and various staff members contributing, a diagnostic impression is formulated and a treatment plan outlined.

Recommendations for the patients most often involve assignment to a suitable once a week therapy group, but can include individual psychotherapy, vocational counseling, periodic follow-up by a psychiatrist, participation in the Day Treatment program, placement in the Half-Way House, family therapy, medical referrals, etc. Most of the patients are encouraged to take Antabuse. Vitamins and tranquilizers are offered for the more acute phases of alcoholism, but are usually discontinued as these symptoms clear up. These basic medications are available right in the center. Antabuse is taken at least once a week in front of the nurse. The rest of the week's supply is usually taken home by the patient. Prescriptions for special medication to control seizures, schizophrenia, depressions, manic episodes, etc. are issued by the psychiatrists when required.

Eventually, the continued outpatient therapy tries to help the sober patient to learn how to cope with his life problems, usual or unusual, without resorting to alcohol. Often he also learns to recognize and be more circumspect about situations which previously have triggered drinking episodes.

Twenty per cent of the slightly over 1,000 active cases of the Center are women. One of the therapy groups is currently all female, 10 are mixed. In age the patients range from 15 to 79, but only 25 per cent of the patients are 35 or younger. Average patient age is about 41.

The Center is admitting about 100 new and returning patients per month. In addition to these about 400 patients are seen in a given month for regular ongoing therapy.

Patients are encouraged to continue in outpatient therapy for at least 6 months but may be seen for a period of several years. The average patient is seen for one hour once a week. More frequent or fewer appointments may be arranged according to the needs of the patient. Patients are also urged to use as many additional community sources of help as they can, including Alcoholics Anonymous, recreational facilities, their religious organizations, their private physician, etc. Since the founding of the Clinic, staff has cooperated closely with physicians and psychiatrists in private practice in the total treatment of alcoholic patients. Many of the patients have previously tried other resources without success. Also, many of them have additional psychiatric problems which may have prevented their successful utilization of other available help.

The greatest problem of the outpatient clinic for alcoholics is to motivate the patient to continue in treatment after the initial phase. If he gets into the regular treatment phase his chances of success are very good.

The Adams Mill Alcoholism Center is open to any person with an alcohol problem who lives in Area A or B (roughly west of Rhode Island Avenue) in the District of Columbia.

ESSEX C. NOEL III, M.D.
*Director, D.C. Mental Health Administration*

### Referral Process for Physicians

Referrals can be made during Clinic hours by telephoning

629-4762
or
629-5275

A short written abstract is appreciated but not required.

*No Appointment Necessary*

Staff available for Spanish-speaking patients.

The address of the Center:
1808 Adams Mill Road, N.W.
Washington, D.C. 20009

Clinic hours:
8:15 a.m. to 4:45 p.m. Monday through Friday
Evening Clinic Monday 5:00 p.m. to 7:15 p.m.

"Registered Nurses—Licensed Practical Nurses"
for Private Duty
DISTRICT OF COLUMBIA
MANPOWER ADMINISTRATION
Vanguard Building
1111 20th Street, N.W.
WASHINGTON, D.C. 20036
CALL—659-8040
Monday–Friday
8:30 a.m.–4:00 p.m.

Miltown®
(meprobamate)

Still serving...
Miltown®
(meprobamate)
400 mg tablets
WALLACE PHARMACEUTICALS

RMK

*Insurance Brokers and Consultants*

**INSURANCE FOR THE DOCTOR**

*PROFESSIONAL LIABILITY

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

*and*

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

* endorsed by the Medical Society of the District of Columbia

**Russell, Marsh & Kennedy, Inc.**

WILLIAM G. RUSSELL
*President*

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

**THE BALANCED RETIREMENT PLAN**

A KEOGH ACT PROGRAM with a wide range of both guaranteed and equity investments. Pension and profit-sharing plans for professional corporations also available on a group basis.

Co-sponsored by the Medical Society of the District of Columbia

For information call or write--

**Suter Associates Retirement Planning Company**

2545 Wilson Blvd.
Arlington, Virginia 22201
*Telephone:* 525–6700

Surgical Supplies and Equipment

*Complete Fitting Service for Ladies and Men*

**KLOMAN SURGICAL SUPPLY CO.**
1028 19th Street, N.W.
Washington, D. C. 20036

*Telephone:* 223-3444

**NURSES REGISTRY**

LICENSED PRACTICAL NURSES
UNDERGRADUATE NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

**CALL—RAndolph 6-6706**

NOW!
PRICE CUT
50%

FOR EVEN
GREATER PATIENT
ECONOMY...

---

**Versapen®-K**
POTASSIUM HETACILLIN
THE AMPICILLIN
DERIVATIVE

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

# NEW MEMBERS

### Active

RIDA AZER, M.D. Office: 730 24th Street. Born in Egypt. Medical degree: Royal College of Surgeons of England, 1959. Specialty: Orthopedic Surgery.

ALEXANDER FANGONIL, M.D. Office: Freedmen's Hospital. Born in Baguio, Philippines. Medical degree: University of Santo Tomas, 1963. Specialty: Urology.

ARMANDO FIGUEROA, M.D. Office: Veterans Administration Hospital. Born in the Philippines. Medical degree: Far Eastern University, 1960. Specialty: Internal Medicine.

KENNETH KAPLAN, M.D. Office: 2141 K Street, N.W. Born in Chicago, Illinois. Medical degree: University of Chicago, 1962. Specialty: Child Psychiatry.

MALVIN KRINN, M.D. Office: 2141 K Street, N.W. Born in Chicago, Illinois. Medical degree: University of Illinois, 1965. Specialty: Ophthalmology.

RUPERT LOUISON, M.D. Office: Freedmen's Hospital. Born in the West Indies. Medical degree: Howard University, 1964. Specialty: General Surgery.

ARMANDO MIRANDA SIRAGUSA, M.D. Office: 915 19th Street, N.W. Born in Bayamon, Puerto Rico. Medical degree: University of Puerto Rico, 1959. Specialty: Internal Medicine and Chest.

VINOD R. MODY, M.D. Office: Freedmen's Hospital. Born in Jetpur, India. Medical degree: University of London, 1957. Specialty: Internal Medicine-Infectious and Tropical Diseases.

DANIEL PRIETO, M.D. Office: 2904 M. L. King Jr. Avenue. Born in the Philippines. Medical degree: University of the Philippines, 1963. Specialty: General Surgery.

KOSARAJU RAO, M.D. Office: 2150 Pennsylvania Avenue, N.W. Born in India. Medical degree: Andhra Medical College, 1959. Specialty: Ophthalmology.

MARILYN RENFIELD, M.D. Office: George Washington University Hospital. Born in Washington, D.C. Medical degree: George Washington University, 1965. Specialty: Pediatrics.

HARVEY LEE RUBEN, M.D. Office: Department of the Navy, Room 6B-044 Forrestal Building. Born in St. Louis, Missouri. Medical degree: Northwestern University, 1966. Specialty: Psychiatry.

WILLIAM F. THOMPSON, M.D. Office: 2021 L Street. Born in New Jersey. Medical degree: George Washington University, 1967. Specialty: Psychiatry.

FIORELLO S. VICENCIO, M.D. Office: 2121 Pennsylvania Avenue, N.W. Born in Quezon City, Philippines. Medical degree: University of the Philippines, 1966. Specialty: Internal Medicine.

OSWALD G. WARNER, M.D. Office: Freedmen's Hospital. Born in Kingston, Jamaica, West Indies. Medical degree: Howard University, 1964. Specialty: Chest and Cardiovascular Surgery.

HERBERT D. WEINTRAUB, M.D. Office: 901 23rd Street, N.W. Born in New York, New York. Medical degree: Oxford University, 1959. Specialty: Anesthesiology.

DON H. WOOD, M.D. Office: Freedmen's Hospital. Born in Crestline, Ohio. Medical degree: Case Western Reserve University, 1959. Specialty: Neurology.

### Associate

ROBERT J. BOBYS, M.D. Office: 4302 St. Barnabas Road, Marlow Heights, Maryland. Born in Washington, D.C. Medical degree: Georgetown University, 1963. Specialty: Otolaryngology.

CAREY W. CAGE, M.D. Office: 5413 W. Cedar Lane, Bethesda, Maryland. Born in Anniston, Alabama. Medical degree: Harvard University, 1959. Specialty: Dermatology.

LEO T. DUFFY, M.D. Office: Room 8-82-FDA, Rockville, Maryland. Born in Hartford, Connecticut. Medical degree: Tufts University, 1934. Specialty: Obstetrics-Gynecology.

DANIEL ISAACSON, M.D. Office: 8218 Wisconsin Avenue, Bethesda, Maryland. Born in Newark, New Jersey. Medical degree: University of Innsbruck, 1964. Specialty: Otolaryngology.

GEORGE E. URBAN, M.D. Office: 4302 St. Barnabas Road, Marlow Heights, Maryland. Born in Baltimore, Maryland. Medical degree: University of Maryland, 1961. Specialty: Otolaryngology.

LEONARD WARTOFSKY, M.D. Office: Walter Reed Hospital. Born in New York, New York. Medical degree: George Washington University, 1964. Specialty: Internal Medicine-Endocrinology.

### Resident-Intern

JAMES COLLINS, M.D. Office: Walter Reed Hospital. Born in Washington, D.C. Medical degree: Howard University, 1965. Specialty: Psychiatry.

LOUIS KAUFMAN, M.D. Office: Georgetown Hospital. Born in Moundsville, West Virginia. Medical degree: West Virginia University, 1970. Specialty: Internal Medicine.

STEVEN STEURY, M.D. Office: St. Elizabeth's Hospital. Born in Dacatur, Indiana. Medical degree: Tufts University, 1966. Specialty: Psychiatry.

WILLIAM WEITZEL, M.D. Office: Walter Reed Army Hospital. Born in Detroit, Michigan. Medical degree: St. Louis University, 1968. Specialty: Psychiatry.

### Student

GEORGETOWN UNIVERSITY. Sophomores: Richard Delany, John Weigand. Junior: Ludwig Cibelli.

GEORGE WASHINGTON UNIVERSITY. Sophomore: Paul McCormick.

HOWARD UNIVERSITY. Junior: Martin Taub.

### Changes in Membership

#### *Transfers*

*Active to Associate:* Richard A. McConnaughy, M.D.

*Associate to Active:* Tsunie Chanchien, M.D.

#### *Resignations*

*Active:* Thomas W. Moore, M.D.

*Associate:* Fidel Quintana, M.D.

*Resident-Intern:* Eligio Aguhob, M.D.

Ulcer Re-lief!

**Dicarbosil®**
ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street. St. Louis, Missouri 63102

**Complete professional liability (Malpractice)* and Personal Insurance for the Doctor.**

Employees Workmen's Compensation
Bonds on Employees
Equipment Floater
Fire Insurance Contents
Business Expense Disability
Non-Cancellable Disability Income
Auto and Home Insurance

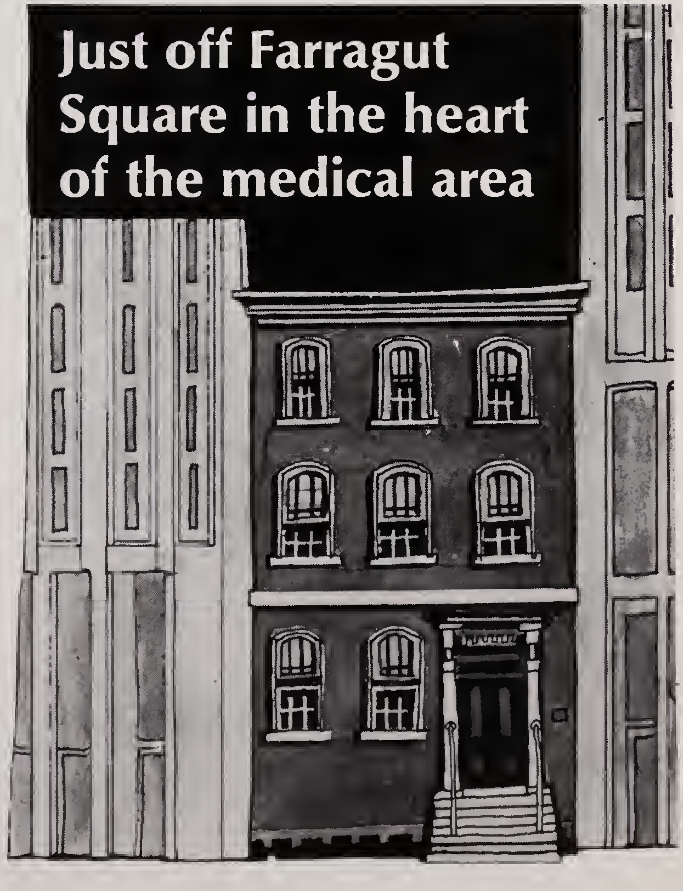
**As endorsed by the Medical Society of the District of Columbia.*

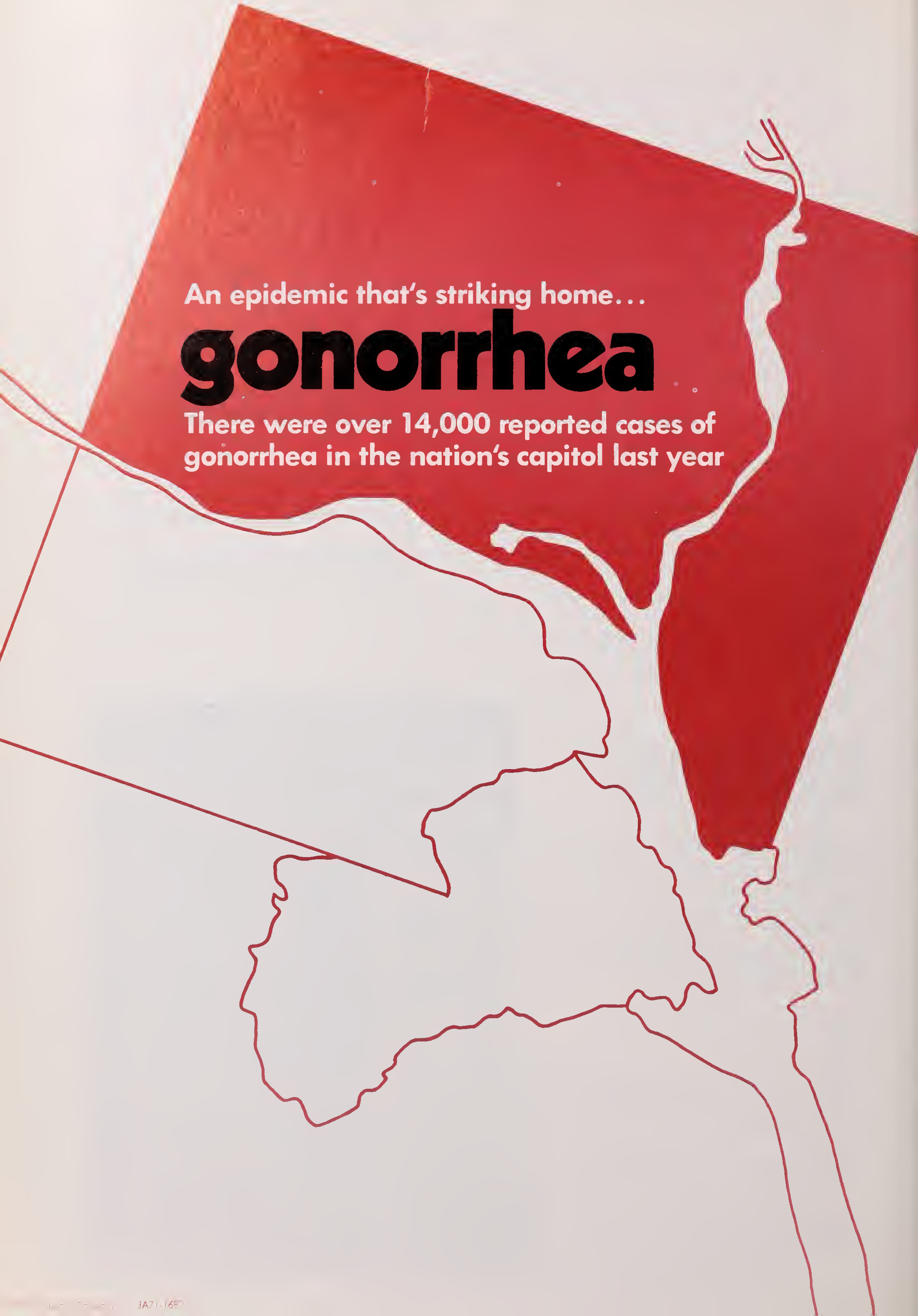
Featuring Umbrella Liability Policies up to $5,000,000.

Working with the St. Paul Companies, Aetna Life and Casualty, INA, Northwestern National, and several other major insurance companies.

**McDermott Insurance, Incorporated**

*822 Connecticut Avenue, N.W.*
*Washington, D.C. 20006*
*Telephone: 638-5322*


Just off Farragut Square in the heart of the medical area



An epidemic that's striking home...

# gonorrhea

There were over 14,000 reported cases of gonorrhea in the nation's capitol last year

JA71-16[illegible]

**In the District of Columbia...and everywhere else...**
**a new alternative**

NEW **Trobicin**® SPECTINOMYCIN
DIHYDROCHLORIDE, PENTAHYDRATE, UPJOHN

**single-dose treatment for intramuscular use only**

**a chemically distinct antibiotic indicated specifically**
**for treatment of acute gonorrhea:**
**in the male–acute urethritis and proctitis**
**in the female–acute cervicitis and proctitis**
**when due to susceptible strains of N. *gonorrhoeae***

**High cure rate:*96% of 571 males, 95% of 294 females**
(Dosages, sites of infection, and criteria
for diagnosis and cure are defined on page 3 of advertisement)

**Assurance of a single-dose, physician-controlled treatment schedule**

**No allergic reactions occurred in patients with an alleged history of penicillin sensitivity when treated with Trobicin, although penicillin antibody studies were not performed**

**Active against most strains of Neisseria gonorrhoeae *in vitro***
(M.I.C. 7.5-20 mcg/ml)

**A single two-gram injection produces peak serum concentrations averaging about 100 mcg/ml in one hour**
(average serum concentrations of 15 mcg/ml present 8 hours after dosing)

NOTE: Antibiotics used in high doses for short periods of time to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Since the treatment of syphilis demands prolonged therapy with any effective antibiotic, and since Trobicin is not indicated in the treatment of syphilis, patients being treated for gonorrhea should be closely observed clinically. Monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected. Trobicin is contraindicated in patients previously found hypersensitive to it.

For full prescribing information, including contraindications, warnings and precautions, please see last page of this advertisement.

*Data compiled from reports of 14 investigators.

**Upjohn** The Upjohn Company, Kalamazoo, Michigan 49001

# Trōbicin and the gonorrhea challenge

### An accelerating epidemic—a decelerating susceptibility to penicillin

Gonorrhea is now the most prevalent reported communicable disease in the nation. The estimated number of new cases of gonorrhea in the United States exceeded two million for the first time in 1970. To compound the problems, strains of *N. gonorrhoeae* increasingly resistant to penicillin and other antibiotics are appearing throughout the country. Schedules of treatment which were effective only a few years ago now result in a significant percentage of treatment failure. *In vitro* studies have demonstrated that resistance of *N. gonorrhoeae* may also develop to Trobicin.

Thus, while aqueous Procaine Penicillin G remains the drug of choice for the majority of patients, the need for a non-penicillin, intramuscular antibiotic for acute gonorrhea in the male and female is abundantly clear. Such an antibiotic should be effective following a single intramuscular injection—and it should not demonstrate cross-resistance with penicillin

### Trobicin—a new alternative specifically for the treatment of acute gonorrhea

Trobicin is indicated in the treatment of acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

### High cure rates: 96% of 571 males, 95% of 294 females

**No allergic reactions occurred in patients with an alleged history of penicillin hypersensitivity when treated with Trobicin, although penicillin antibody studies were not performed.**

### Chemically distinct

Trobicin is structurally not related to any other antibiotic commonly used to treat gonorrhea.

### The assurance of a single-dose, physician-controlled treatment schedule

Intramuscular injections should be made deep into the upper outer quadrant of the gluteal muscle.

Adult male: Single 2 gram dose I.M. in acute gonorrheal urethritis. Single 4 gram dose I.M. (should be divided between two gluteal injection sites) in gonorrheal proctitis and in patients being re-treated after failure of previous antibiotic therapy. In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams intramuscularly is preferred.

Adult female: Single 4 gram dose I.M. (should be divided between two gluteal injection sites) in acute gonorrheal cervicitis and proctitis.

Safety for use in pregnancy has not been established, nor has safety for use in infants and children.

Clinical Results with Single-Dose Treatment, Intramuscularly* (Data compiled from reports of 14 investigators**)

| | Dosage | Number of Patients | Number Cured | Percent Cured |
|---|---|---|---|---|
| **Adult Males:** Gonorrheal urethritis | **2 grams**<br>**4 grams** | **475**<br>**96** | **457**<br>**93** | **96%**<br>**97%** |
| **Adult Females:** Gonorrheal cervicitis | **4 grams** | **294** | **280** | **95%** |

Diagnosis was confirmed by cultural identification of *N. gonorrhoeae* on Thayer-Martin medium in all patients. Criteria for cure: negative culture after at least 2 days post-treatment in males and at least 7 days post-treatment in females. Any positive culture obtained post-treatment was considered evidence of treatment failure even though the follow-up period might have been less than the periods cited above under "criteria for cure" except when the investigator determined that reinfection through additional sexual contacts was likely. Such cases were judged to be reinfections rather than relapses or failures. These cases were regarded as non-evaluatable and were not included in the table above.

The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

---

*4-gram doses were injected in two gluteal sites.

**Medical Research Files, The Upjohn Company

**a chemically distinct antibiotic indicated specifically for treatment of acute gonorrheal urethritis and proctitis in males and cervicitis and proctitis in females when due to susceptible strains of *N. gonorrhoeae***

**new Trobicin®**

STERILE SPECTINOMYCIN DIHYDROCHLORIDE PENTAHYDRATE, UPJOHN

**single-dose treatment for intramuscular use only**

**Sterile Trobicin®**
(spectinomycin dihydrochloride pentahydrate)—For Intramuscular injection:
2 gm vials containing 5 ml when reconstituted with diluent. 4 gm vials containing 10 ml when reconstituted with diluent.

An aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between Trobicin and penicillin.

**Indications:** Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae.*

**Contraindications:** Contraindicated in patients previously found hypersensitive to Trobicin. Not indicated for the treatment of syphilis.

**Warnings:** Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.

*Safety for use in infants, children and pregnant women has not been established.*

**Precautions:** The usual precautions should be observed with atopic individuals. Clinical effectiveness should be monitored to detect evidence of development of resistance of *N. gonorrhoeae.*

**Adverse reactions:** The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

**Dosage and administration:** Keep at 25°C and use within 24 hours after reconstitution with diluent.

*Male*—single 2 gram dose (5 ml) intramuscularly. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.

*Female*— single 4 gram dose (10 ml) intramuscularly.

**How supplied:** *Vials, 2 and 4 grams —with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of spectinomycin dihydrochloride pentahydrate equivalent to 400 mg spectinomycin per ml. For intramuscular use only.

*Susceptibility Powder*—for testing *in vitro* susceptibility of *N. gonorrhoeae.*

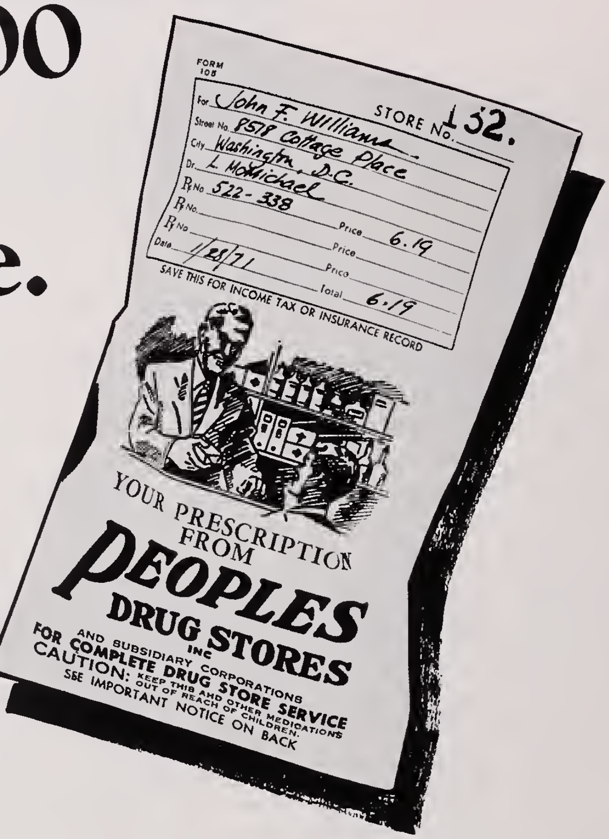
**Human pharmacology:** Rapidly absorbed after intramuscular injection. A two-gram injection produces peak serum concentrations averaging about 100 mcg/ml at one hour with 15 mcg/ml at 8 hours. A four-gram injection produces peak serum concentrations averaging 160 mcg/ml at two hours with 31 mcg/ml at 8 hours.

*For additional product information, see your Upjohn representative or consult the package insert.* MED-B-1-S (LWB)

**Upjohn**

The Upjohn Company, Kalamazoo, Michigan 49001

# The bag that has earned more than 125,000,000 votes of confidence.


FORM 108
For John F. Williams
Street No. 8518 Cottage Place
City Washington, D.C.
Dr. L. McMichael
℞ No 522-338
℞ No
℞ No
Date 11/28/71
STORE No. 152.
Price 6.19
Price
Price
Total 6.19
SAVE THIS FOR INCOME TAX OR INSURANCE RECORD
YOUR PRESCRIPTION FROM
PEOPLES DRUG STORES INC
AND SUBSIDIARY CORPORATIONS
FOR COMPLETE DRUG STORE SERVICE
CAUTION: KEEP THIS AND OTHER MEDICATIONS OUT OF REACH OF CHILDREN.
SEE IMPORTANT NOTICE ON BACK

Over the years, that's a lot of confidence in prescriptions from Peoples. And we're justifiably proud.

But since we opened shop in 1905, many things have changed. Drug industry research has developed better ways to preserve health and serve the physician. The prescribing physician has developed more sophisticated skills. But one thing has never changed—the careful, professional way in which our pharmacists personally fill your prescriptions.

Filling *your next one* is as important to us as the 125,000,000 that came before it.

**THESE 6 PEOPLES DRUG STORES ARE OPEN 24 HOURS A DAY FOR THE CONVENIENCE OF YOU AND YOUR PATIENTS.**

| | |
|---|---|
| 1121 Vermont Ave., N.W. at Thomas Circle | 628-0720 |
| Lee Highway & Old Dominion Dr. (Arlington) | 522-0011 |
| 7128 Wisconsin Ave., & East-West Hwy. (Bethesda) | OL2-2380 |
| 7939 New Hampshire Avenue (Langley Park) | 434-3121 |
| Laurel Shopping Center (Laurel) | 776-7514 |
| 7534 Annapolis Road (Lanham) | 577-7282 |

PEOPLES®

PRESCRIPTION DRUG STORES

**WHEN NEEDED, RECOMMEND A PEOPLES "SAFETY CAP" PRESCRIPTION CONTAINER FOR FAMILIES WITH SMALL CHILDREN.**

**IN ASTHMA**
**IN EMPHYSEMA**

*optional therapy*

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

**MUDRANE—original formula**
*First choice*

**MUDRANE-2**
*When ephedrine is too exciting or is contraindicated*

**MUDRANE GG**
*During pregnancy or when K.I. is contraindicated or not tolerated*

**MUDRANE GG-2**
*A counterpart for Mudrane-2*

**MUDRANE GG ELIXIR**
*For pediatric use or where liquids are preferred*

*Clinical specimens available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217
*Manufacturers of Ethical Pharmaceuticals*

bp
KONSYL
REG. U.S. PAT. OFF.
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
PLANTAGO OVATA COATING
MADE BY
BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 12 OZ.
bp
L.A. FORMULA
REG. U.S. PAT. OFF.
BRAND OF PSYLLIUM HYDROPHILIC MUCILLOID
MADE BY
BURTON, PARSONS & CO.
WASHINGTON, D.C. 20027
NET WEIGHT 14 OZ

Sugar-free medication for the obese patient.

For the patient who requires maximum palatability.

the safe,
effective ways to promote
normal peristalsis

*in the treatment of constipation or diarrhea*

**Burton, Parsons & Co., Inc.** *Manufacturers of Ethical Pharmaceuticals Since 1885*
■ WASHINGTON, DC. 20027 ■ MONTREAL, CANADA ■ MUNICH, GERMANY

**What to do until suppositories work:**

Create a time machine
Read "War and Peace"
Learn Sanskrit

Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

Fleet
pharmaceuticals

C. B. FLEET CO., INC.
Lynchburg, Va. 24505

**Warning:** Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present. **Caution:** Do not administer to children under two years of age unless directed by a physician.

**References:** 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.

**HEALTH AUTO-DATA, INC.**
4900 Massachusetts Avenue, N.W.
Washington, D.C. 20016
(202) 966–4300

*Serving the Physician
and the Community*

Health Auto-Data, Inc. (HAD), is organized to provide services to physicians to assist them in their daily routines.

Overhead cost may be reduced by having routine work done at the HAD facility.

We prepare a "patient profile" which may save a considerable amount of time. By having selected tests performed and a medical history taken prior to the physician's initial consultation with the patient, the physician finds it easier and less time-consuming to review the patient's history and analyze the test results.

The medical history is self-administered by patients utilizing an automated console. It passively teaches the patient how to report to a physician, again resulting in a time saving for the physician.

Several semi-automated physiological and laboratory tests are performed.

The entire patient-testing procedure only lasts about an hour and a half! HAD does not interpret the tests. HAD concentrates on the efficient and low-cost performance of routine tests.

The computer-printed reports - - with annotations by the patient's physician - - can serve as records to enclose when making referrals. The records with added diagnosis and recommendations can provide a full report when admitting a patient to a hospital. With progress notes regarding hospital treatment and disposition, the material provides the basis for a hospital summary.

Appointments for patients may be made at the patients' convenience. Call 966–4300 for further information or clip out this form and mail to:

HEALTH AUTO–DATA, INC.
4900 MASSACHUSETTS AVENUE, N.W.
WASHINGTON, D.C. 20016

FROM: DR.______________________________

STREET ADDRESS______________________________

CITY______________________________STATE__________

ZIP CODE____________________

TELEPHONE NUMBER____________________

☐ SEND LISTING OF SERVICES AND FEES

☐ HAVE A REPRESENTATIVE CALL FOR APPOINTMENT TO EXPLAIN SERVICES

☐ I AM INTERESTED IN A FIRST-HAND INSPECTION OF HAD - - CALL ME TO ARRANGE A VISIT

☐ I AM INTERESTED IN BEING PROCESSED THROUGH HAD FACILITY - - CALL ME TO ARRANGE AN APPOINTMENT SO I CAN INCLUDE YOUR SERIES OF TESTS IN MY ANNUAL PHYSICAL EXAMINATION. I UNDERSTAND THIS IS COMPLIMENTARY

Schering

# for grown-up colds

. . . that call for strong medicine
. . . the kinds that potent DRIXORAL is reserved for.
(Noses under 12 years of age
aren't eligible.) For the adult case of
nasal/sinus congestion:
a tablet for the day keeps congestion away,
a tablet at night, sleeper's delight.

Sustained-Action Tablets

**b.i.d. Drixoral®**

brand of dexbrompheniramine maleate 6 mg. and d-isoephedrine sulfate 120 mg.

The round-the-clock oral decongestant

**Clinical Considerations: Indications:** DRIXORAL is indicated for round-the-clock relief of symptoms of upper respiratory mucosal congestion in seasonal and perennial nasal allergies, acute rhinitis and rhinosinusitis, and eustachian ube blockage.

**Contraindications:** DRIXORAL should not be given to children under 12 years of age. DRIXORAL should not be administered to pregnant women or nursing mothers until the safety of this preparation for use during gestation and lactation is established. The preparation is contraindicated also in patients with severe hypertension and coronary artery disease. **Warnings:** As in the case of other preparations containing central nervous system acting drugs, patients receiving DRIXORAL should be cautioned about possible additive effects with alcohol and other central nervous system depressants (hypnotics, sedatives, ranquilizers). For the same reason they should be cautioned against hazardous occupations requiring complete mental alertness such as operating machinery or driving a motor vehicle. **Precautions:** Isoephedrine-containing preparations should be used with caution in the presence of: hypertension; coronary artery disease; any other cardiovascular disease; glaucoma; prostatic hypertrophy; hyperthyroidism; diabetes. **Adverse Reactions:** The physician should be alert to the possibility of all possible adverse reactions which have been observed with sympathomimetic and antihistaminic drugs. These include: drowsiness; confusion; restlessness; nausea; vomiting; drug rash; vertigo; palpitation; anorexia; dizziness; dysuria due to vesicle sphincter spasm; headache; insomnia; anxiety; tension; weakness; tachycardia; angina; sweating; blood pressure elevation; mydriasis; gastric distress; abdominal cramps; central nervous system stimulation; circulatory collapse. **For more complete details, consult package insert or Schering literature available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.**

SCH-2654

**FOR THE BEST GIFT TO YOUR FAMILY:**

**Give yourself, your company for a Xmas weekend of secluded togetherness. Entertainment, yes—four-in-hand coach rides, "Bringing in the Boar's Head." But also leisure for golf, walking, talking. Special rates.**

**THE BOAR'S HEAD INN**

Charlottesville, Virginia

*For brochure, reservations, call 703:296-2181.*

CAPITAL NURSE REGISTRY

(Est. 1910)

Licensed Practical Nurses and Practical Nurses Recommended by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding Registries, serving physicians and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

*24 Hour Telephone Service*

RAndolph 3-2600 or 3-1771

**MAXWELL AND TENNYSON INC.**

*Pharmacists*

916 Nineteenth Street, N.W.

**SERVICE TO PHYSICIAN & PATIENT SINCE 1926**

**PHONES**

**223-4711**

**223-9797**

**223-9798**

*KALORAMA CONVALESCENT HOME, INC.*

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE

for the medical management of the acute stages of alcoholism.

2001 KALORAMA ROAD

at 20th Street, N.W. Adams 2-0063

# CLASSIFIED ADVERTISEMENTS

**Advertisements under the following headings are charged at the rate of $10.00 for one insertion of 50 words or less; $25.00 for insertion of the same advertisement in three consecutive months. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.**

***Classified advertisements of a professional nature are free to members.***

## OFFICE SPACE AVAILABLE

EXCELLENT PROFESSIONAL SPACE. 3,200 sq. ft., Connecticut Avenue and Tilden Street, N.W. Long Term Lease at favorable monthly rental. Contact Mrs. Hodge, (202) 966-5334.

FOR RENT: Suite of offices fully equipped. Three examining rooms, three offices and reception room. Shared basis office space and medical assistant. Phone (202) 298-7096, 10 a.m.-5 p.m., Monday-Friday.

FOR SALE OR LEASE: Fully equipped modern medical laboratory, including some automated equipment. Ideal location, over 200 doctors within a 5 block radius. Established over 20 years. Ideal for group of physicians or pathologist. Laboratory already licensed by State of Maryland. All technical help will stay if desired. Building can also be purchased, which has 2000 sq. ft. of laboratory space. Owner retiring. Box No. 25, Medical Annals of the District of Columbia, 2007 Eye Street, N.W., Washington, D.C. 20006.

PHYSICIAN RETIRING from active practice of Internal Medicine. Have 2 ½ years to run on current lease. Would like to sublet for that period with possibility of taking up 5 year option thereafter. Suite consists of about 900 sq. ft., including nurses office, waiting rooms, consultation room, and 3 examining rooms. Kindly contact Harold L. Hirsh, M.D., 2000 N St., N.W., Washington, D.C. 20036, Suite 111, Phone (202) 223-5000.

FOR RENT: Office for 2 doctors, 5323 Connecticut Avenue, N.W. 3 examining rooms, 1 lab, 1 x-ray, and 1 waiting room. Contact Resident-manager, Mr. Adams, (202) 362-7847.

FOR RENT: 1726 Eye Street, N.W. Ideal office space for GP or specialist. Suite for dentist also available. All utilities included plus switchboard and char service. Parking available. Telephone (202) 298-6936.

## PHYSICIANS WANTED

PHYSICIANS WANTED-IMMEDIATE NEED. For permanent staff and on sessional basis at PRETERM, 1726 Eye Street, N.W., Washington, D.C. 20006. An innovative outpatient clinic for pregnancy termination, counseling and birth control. Surgical and Ob/Gyn. Call or write Benjamin N. Branch, M.D., Medical Director (202) 298-7300.

## PRACTICE FOR SALE

GENERAL PRACTICE, established 40 years in Mt. Pleasant area, fully equipped office, X-ray, EKG, diathermy. Call Mrs. E. H. Markwood, (703) 536-7727 or write 4142 N. River Street, Arlington, Virginia 22207.

## EQUIPMENT FOR SALE

FOR SALE: 1) Green Metal Examining Table-new; 2) Green Scales-Health-O-Meter-new; and 3) Instrument Cabinet-used. Retiring from practice January 1, 1972 but available now. Call (202) 248-8476 for further details.

FOR SALE: Laboratory equipment including Bausch and Lomb binocular clinical microscope, Adams Readacrit Micro-hematocrit centrifuge, Clay-Adams centrifuge, Pelton-Crane autoclave and table. Telephone (202) 296-8170.

## SERVICES

MAKE YOUR WILL. Why delay? Receive 4 Will Forms and a 64-page booklet, "WILLS—How To Make and How To Break Them," written by an attorney. Just send $1.50 to Legal Forms Company, Dept. 529, 1830 Guardian Building, Detroit, Michigan 48226. (Satisfaction guaranteed.)

## REAL ESTATE

FOR SALE: Syndicate forming. 200 acres timberland Westmoreland County, Virginia. $90,000, good terms. Phone for detailed information. Mr. Clay, (202) 484-3130.

# INDEX OF ADVERTISERS

**These Advertisers Support Your Journal.**
**Please Give Them Your Support.**

*Page*

**Automated Medical Service**
Health Auto-Data, Inc. .......... 10

**Bank**
National Bank of Washington .......... 2

**Dietetic Products**
Campbell Soup Company .......... T-765

**Insurance**
McDermott Insurance, Inc. .......... T-789
Mutual of Omaha .......... 3-C
Russell, Marsh & Kennedy .......... T-786

**Equipment and Supplies**
Kloman Surgical Supply Company .......... T-786

**Investment Planning**
Suter Associates Retirement Planning Company .......... T-786

**Nurse Registries**
Association of Undergraduate and Practical Nurse Registry .......... T-786
Capital Nurse Registry .......... 12
District of Columbia Manpower Administration .......... T-785

*Page*

**Pharmaceuticals**
Arch Laboratories .......... T-789
Bristol Laboratories .......... T-787
Burton Parsons .......... 8
Dorsey Laboratories .......... 15
C. B. Fleet Company .......... 9
Geigy Pharmaceuticals .......... 4
Eli-Lilly & Company .......... 6, T-768
William P. Poythress .......... 7
Roche Laboratories .......... 2-C-1, 4-C
Schering Corporation .......... 11
G. D. Searle .......... T-766-767
Smith, Kline and French .......... 16
The Upjohn Company .......... T-780-782, T-790-793
Wallace Pharmaceuticals .......... T-785

**Pharmacies**
Maxwell & Tennyson .......... 12
Peoples Drug Stores .......... T-794

**Sanitariums**
Kalorama Convalescent Home .......... 12

**Vacation and Reaction**
Boar' s Head Inn .......... 12

**T-text**

# Have you protected your most valuable asset?

You've insured your ife, your home, your car. But have you nsured your most valuable asset — your ability to earn an ncome?

f you were disabled omorrow by a serious llness or accident how would your family be able to meet your inancial obligations — the payments on your home, your car, the grocery bill and the numerous other bills that are a regular part of everyday living?

Protect your income now with the Disability ncome Protection Plan available to you as a member of the Medical Society of the District of Columbia.

**PAYS UP TO $225.00 A WEEK**
**when you're sick or hurt and can't practice!**

The benefits provided by this remarkable plan are TAX-FREE, yours to use as you see fit. Payable directly to you regardless of any other coverage you may have.

What's more, your coverage is guaranteed renewable while the program remains in force regardless of the amount of benefits paid to you or any future changes in your health.

And thanks to the mass purchasing power of your Society, you are able to purchase this protection at special rates that save you money.

So get all the facts on this primary insurance protection today! Complete and mail the coupon below. You'll receive free facts without obligation.

*Endorsed by The Society for Over Twenty Successful Years*

UNDERWRITTEN BY

**Mutual of Omaha**®
*The Company that pays*

Life Insurance Affiliate: United of Omaha

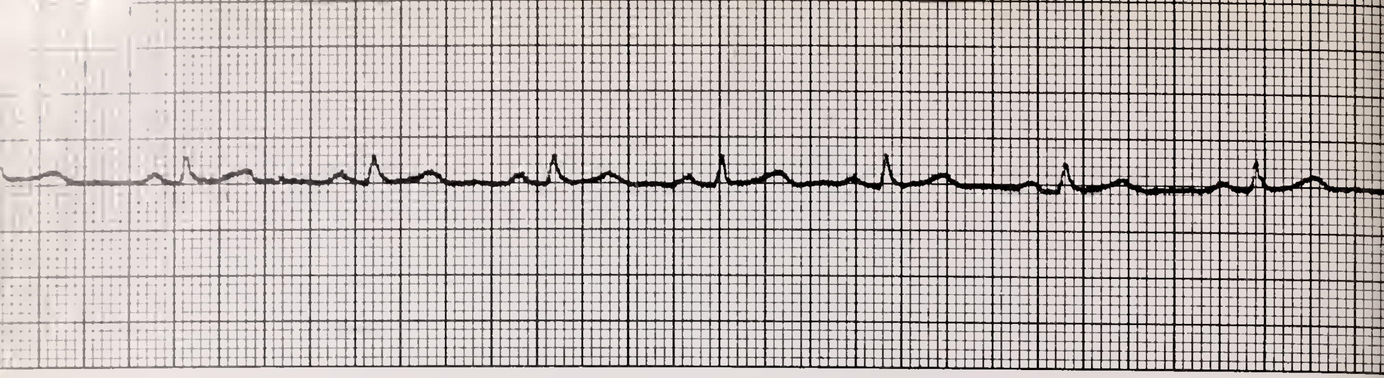
**Joseph E. Jones, Administrator**
**1666 Connecticut Avenue, N.W.**
**Washington, D. C. 20009 Phone (202) 483-3100**

Please rush me free facts on the special Disability Income Protection plan available to me as a member of the Medical Society of the District of Columbia.

Name________________________________

Address______________________________

City______________State________ZIP________



# When disease is ruled out and psychic tension is implicated

# Valium® (diazepam)

## 2-mg, 5-mg, 10-mg tablets

# helps relax the patient and relieve his somatic symptoms

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose™ packages of 1000.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110